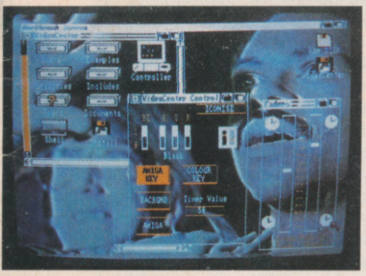
Issue 131 • 11th May 1991 • 88p

NEW COMPUTER EXPRESS

WIN £500 of PC Organiser software See page 58

FIRST NEWS • FIRST REVIEWS • BEST BUYS • YOUR WEEKLY GUIDE

AMIGA



DESKTOP VIDEO
2 BUDGET BOARDS REVIEWED

MC 600
MS DOS
3.22

PSION'S MC600
THE PERFECT PORTABLE?

PLUS: HOW TO TURN YOUR AMIGA INTO A CDTV FOR ONLY £299

AT LAST : THE CDTV

POWER
CDTV
0:46
Commodore
CDTV REMOTE CONTROLLER

IT'S HERE AND IT'S ONLY £599!

IS THIS THE START OF SOMETHING BIG?

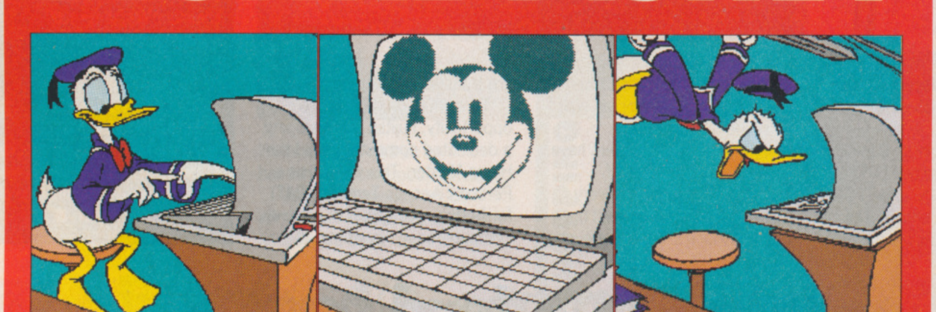
EXCLUSIVE: BERLIN'S AMIGA SHOW - Full report

GAMES

HYDRA
DOMARK
TENGEN
ICE SOFTWARE

HYDRA: A HIT?
Domark's stunning coin-op conversion

DIGITAL DISNEY



CLASSIC ANIMATION FOR THE AMIGA

Future PUBLISHING Your guarantee of value

Frontend

GRIDS IN SPACE

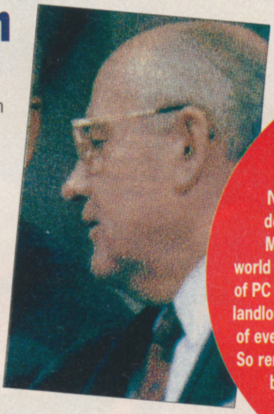
GRiD Computers don't just make state-of-the art PCs like the GRidPad reviewed by *Express* in March. The company also produces an IBM compatible laptop that is used by business people and astronauts alike.

The latest trip made by the machine was on the NASA space shuttle Discovery in a secret scientific mission earlier this month. The 1530 laptop was used to monitor and control on-board experiments in the scientific bay.

Astronauts have been using the GriD 1530 laptops on every shuttle trip since 1983; also using it to display the vehicle's position over the earth and to calculate the approach paths for rendevous with passing satellites.

You won't be able to buy a space shuttle, but you might like to find out more about the computer. If so you should call 081-547 3955. ■

Gorbachev gets on-line satisfaction



The latest on-line system in Russia has been received with "satisfaction" by President Gorbachev. And it could offer the same to you.

Glasnet is an independent, non-Government funded network, based in Moscow. It is aimed at increasing Electronic Mail (E-mail) links both within the Soviet Union and the West. The company behind the project, Computerlink, has only just received enough phone lines to put the service into full operation, but now that these have been provided, Glasnet is hungry for data.

To find out more about the system phone +7 095 123-0141. ■

GET REAL!

Computers bar none

Next time you get a pint which looks a bit off, don't blame the landlord, blame his computer.

More and more public houses are moving into the world of computer technology. *Barstock* is a new piece of PC software which is aimed at the publican. It allows landlords and landladies to keep a micro-eye on stocks of everything from pork scratchings to pints of wallop. So remember, it may not be an off-brew, it might be a bug in the system which is to blame for your next hangover. ■

GET REAL!

Japan jockies for a place

Japanese gamblers can now place their bets directly, via computer.

The Japanese Horse Racing Association has agreed to accept bets from PC and Nintendo owning punters. The betting types can also access information as to the weather conditions at the track, as well as runners and riders. Subscribers to the system have to settle their on-line turf accounts at the end of every week with a computerised bank debit. Winnings, if there are any, are transferred the same way.

To cash in on this golden opportunity, Fujitsu is developing a dedicated computer called the Home Master. This will act as a Personal Access Terminal (PAT) for betting and a host of other computer-based systems. ■

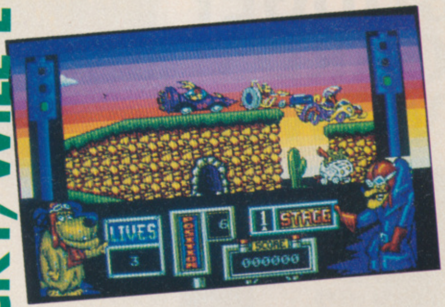
What's bugging you?

Researchers at the University of Wales had their efforts to find a cure for the common cold interrupted by a computer virus.

Dr Ron Eccles, the director of the project explained to *Express* this week: "We use five Macintosh SE30s and a IIci all of which were infected by the WDEF virus. This was brought into the office by a student of biochemistry, who was completely innocent of any malicious intent by the way. We have now put small notes above all the Macs saying 'WARNING VIRUS'".

The Centre for the Common Cold and Nasal Research has been investigating symptoms such as running noses and sore throats for some eight years. Before using Macs it made use of DEC computers and then IBM compatible Olivetti's, "In all that time, this was the first virus we have caught". Now the digital disease has been removed, Dr Eccles and his team are to continue with their work. ■

RACEY, WACKY, WILE E



Remember Chugga-Bug, the Anthill mob, or Penelope Pitstop? They're all characters from the Hanna Barbera cartoon series *Wacky Races*, and now they're all transferring to computer screens.

Wacky Races is the latest release from Hi Tec software and comes in a rash of toon-based games including animated stars from the Hanna Barbera and Warner Brothers stables. Bugs Bunny is the first character from Warner's to be digitised and will be on the shelves this August, quickly followed by Wile E Coyote and Yosemite Sam.

In the meantime *Wacky Races* will be available from the end of May for the Spectrum, CPC and C64 at £3.99, ST and Amiga at £7.99. ■

It's Le Mans world

What have Evesham Micros, Olivetti, and Sharp got in common? Yes, they're all involved in computers, however, they're also sponsoring a pair of Rover 216 GTi sports saloons.

In fact Evesham has taken the sponsorship to the extreme with company director Richard Austin actually driving one of the motors. The other vehicle is driven by David Loudon who, at the time of going to press, was Dunlop Rover GTi Championship leader. ■

ROB'S RUMANIAN COMPUTER APPEAL

Systems programmer Rob Partridge has launched an appeal for computer equipment on behalf of Rumanian hospitals.

He was so appalled by the state of health care and the information technology which adminsters it, in one Rumanian hospital, that he decided something had to be done. However, it's not money he's after, it's computer hardware, peripherals and software.

Partridge accompanied his wife, a community mid-wife, on a visit to a hospital in Arad, a town in the west of Rumania. He described the conditions: " Arad is one of the wealthier areas of Rumania, but even on the hospital's maternity ward they had no cotton wool. They were using sterilised rags which had already been used for who knows what."

After a conversation with the hospital's one, and only, IT specialist Partridge decided how he could help. "The guy was using an ancient Rumanian TPD computer, like a dirty old box, the size of a filing cabinet and running CP/M to deal with the administration for the whole hospital", he explained, "I knew this was an area in which I, and other British computer users, could help".

On his return to the UK he decided to start the appeal. "What we're after is good quality, well built computer equipment which will last. The company I work for, Sandyford Computers, has offered to deal with shipping the kit abroad. While we don't want money, if any cheques or postal orders do arrive, they will be used for medical supplies and will be handled," says Rob.

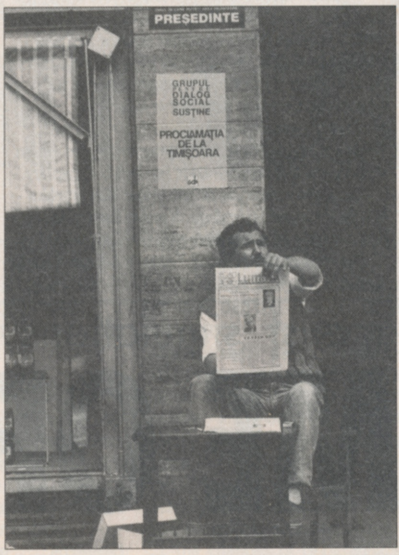


PHOTO COURTESY OF *THE INDEPENDENT NEWSPAPER*

If you can help you should write to Rob Partridge at: Sandyford Computers, 39 College Street, Kempston, Bedford MK42 82U. ■

Crisps out crunch Turtles

Nintendo
ENTERTAINMENT SYSTEM
ACTION SET
NES VERSION
WALKERS

Nintendo, like the rest of the world, has decided that the Turtles don't sell any more. So, in a bid to increase sales of its Nintendo Entertainment System (NES) it is moving into crisps!

A new promotion, starting now and running for 12 weeks, sees 400 million packets of Walker's crisps which offer snack food addicts the chance to win a Nintendo Action Set every day. It's another collect the tokens and send them in promo, so if you want a free NES get munching. ■

GET REAL!

Be clever - win a £700 prize

You could win a £700 video Walkman in Sony's latest promotion.

Called Box Clever 2 (number one ran last year) all you have to do to enter is purchase a box of Sony floppy disks, cut out the coupon you find stuck to it and send it in. You'll probably need to work with quite a few friends if you want to win the Walkman however, it requires 2,600 tokens before you can collect it!

Box Clever 2 runs for four months and Sony will accept tokens up until the end of August. ■

GET REAL!

Bobby Charlton's Sega summer

Former England World Cup-winning hero Bobby Charlton has put his name to Sega's summer tour.

Youngsters around the country will be given the chance to play in six-a-side soccer tournaments, called Bobby Charlton's Soccer Sixes, in order to win a place in the grand final later in the summer.

Aside from the long ball and heavy tackles there will also be a chance to play one of 140 Sega Mastersystem and Megadrive games in a bid to become Sega Masterblaster. Each regional finalist of this competition will win a Mastersystem, there will also be a host of runners-up prizes.

The grand final of both the soccer and Sega competitions will be held at Old Trafford and winners stand to gain what Sega claims is a "Five-star package to the England v Turkey European Championship qualifier at Wembley", as well as a handshake from Bobby himself.

Dates and venues will be announced in *Express* as soon as we have them. ■

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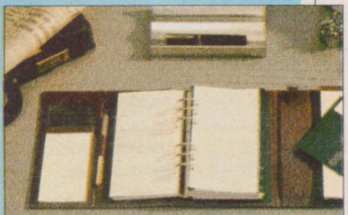

SHOPPING EXPRESS

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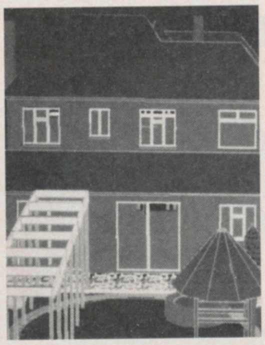
The house that FastCAD built



This house has been created in three dimensions using the latest release of FastCAD 3-D, an advanced PC-based Computer Aided Design (CAD) system.

The latest version features enhanced draughting and dimensioning facilities which ensure that curved objects look smooth and not a series of flat surfaces. It is also written in assembler language for maximum speed.

Fast CAD 3-D is available as a package with FastCAD 2-D for £2,000 from FastCAD UK Distribution on 0923 240272. ■

Chuck Yeager flies into combat

Aerial dog fights between World War II Luftwaffes and Phantom jets will be possible in *Chuck Yeager's Air Combat*, the follow-up to Electronic Arts best ever selling title.

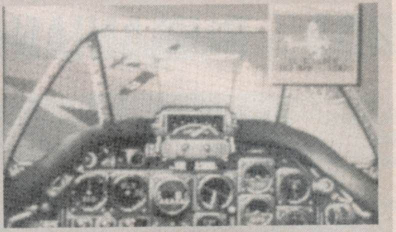
A Custom Mission feature allows players to select the type of plane they want to fly as well as the planes of their enemies from 17 possible models, including P51 Mustangs, FW 190s and MiG 25s. The action takes place in either World War II, Vietnam or Korea and players can choose to be on either side.

Chuck Yeager, the first man to fly through the sound barrier, has again been consulted on the design of the game and provides flight tips and commentary.

The game makes use of 256 colour VGA graphics and vector-based technology. A replay facility means that players can watch their feats from any angle.

The original game, *Chuck Yeager's Advanced Flight Trainer*, has sold over 480,000 units.

Chuck Yeager's Air Combat will be out in June for £29.99 for the IBM PC.



• *You can watch the action in* Chuck Yeager's Air Combat *from any angle as many times as you want.*

Schoolkids addicted to computers

A whole generation of computer game addicts are growing up sexually retarded, according to researchers at Glasgow university.

Their report reveals that many adolescent gamers who stay locked away in their bedrooms for many long solitary hours are failing to develop the social skills to form lasting relationships.

A team lead by Dr Iain Brown surveyed 350 children between the ages of 12 and 18. They found that on average the kids spent two thirds of their spare time playing on computers and that it was mostly boys who admitted they were addicts.

"They sacrifice everything for their passion, and the computer becomes their only friend," said Dr Brown. "They are like alcoholics who start by drinking socially." ■

Sickening Holocaust 'simulations' discovered

SHAME OF NAZI DEATH GAMES

Software-based Nazi propaganda is circulating in Germany and Austria. So-called 'games' featuring the torture and murder of prisoners in a death camp have been discovered by the Nazi-busting organisation Simon Weisenthal Centre.

Concentration Camp Manager features graphical illustrations of the normal Nazi paraphernalia (Swastikas, death-heads, and lightning flashes) as well as of Adolf Hitler. In the game the player runs the Treblinka concentration camp, and must gas people in order to sell their personal effects, which sickeningly include gold fillings from teeth. The player must also maintain the gas chambers.

The software is mainly based on the Holocaust of the Nazi Final Solution, but players can also add extra gas chambers for Turks. Racial attacks against Turks, who represent one of the large numbers of 'guest workers' in modern Germany are on the increase. Also, the game features chilling graphic sequences of a large castle, with a chimney spewing out smoke.

Another title, called *Aryan Test*, is claimed to have been written by a company called 'Hitler and Hess' in Buchenwald, the site of another Nazi death camp.

The Simon Weisenthal Centre, named after the legendary Nazi-hunter, reports that it has been sent eight games. Spokesman Rabbi Abraham Cooper says the games are well known among Austrian and German youngsters. He believes they are the work of neo-Nazis hoping to gain support in schools, through a medium with which parents are unfamiliar. Distribution is via bulletin boards, as well as under-the-counter sales.

Nazi games have been circulating in Germany for the past three years, but their appearance in Austria has caused a storm of controversy. Last week an Austrian daily newspaper conducted a special poll, and found that 22 per cent of students in one city had played such games, and 39 per cent knew of them.

The existence of computer software featuring racist propaganda breaks strict German and Austrian anti-Nazi laws. The Los Angeles based Simon Weisenthal Centre said that it would be raising the issue with the German authorities. ■

Xtree-ordinary

The PC owner's good friend and companion *Xtree* has been made easier to use and re-released at a lower price .

One of the greatest bugbears of the MS-DOS command line system is that it is difficult to get a good overview of what your system looks like. There are a number of ways around this such as moving to Windows, or buying Geoworks' *Ensemble*. While both of these are good options, they are expensive.

A cheap alternative to this could be *XtreeEasy*. This is a cut down version of the full file management system. It costs £50 and offers many of the facilities available to *Xtree* users. You can carry out standard DOS functions like copy, delete and rename, as well as being able to use the built-in ASCII editor, which takes over from the unfriendly EDLIN.

The system has two new features – Xtree Menu which searches the hard drive and builds a personal applications menu, ie you get to systemise the programs which you use the most and a pull-down menu system. The price is £50. Call 081-579 7150. ■

Secret Soviet super MiG flight sim

Domark is set to soar with a flight sim based on a Soviet plane still officially classified as top secret.

The MiG 29 M Super Fulcrum should be shown public for the first time at the Paris Air Show this September. Domark reckons it will have the sim ready to launch at the same time.

The company claims contacts in the Soviet Union have leaked details, and Simis, the team responsible for the original *MiG 29 Fulcrum* game, is already working on an authentic new version based on the new plane.

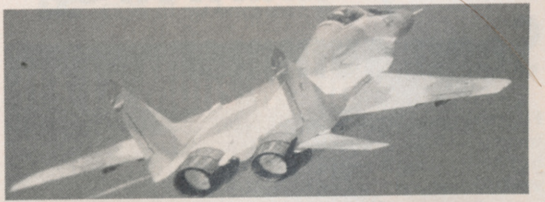
"We are very excited about it. We think that we'll have a simulation ready for September," said a spokeswoman for Domark.

The new plane is based on the successful MiG 29, but has been enhanced, and these refinements will be reflected in the sim. It will feature new performance specifications, new instrument panels and a transparent cockpit.

MiG 29 M Super Fulcrum will retail at full price and existing MiG 29 Fulcrum will be able to upgrade at a lower cost.

The Simis team is also developing another exciting flight sim for Domark based on the American Harrier aircraft, the AV-8B. Combining simulation and strategy, it will require you to fly one of the most testing aircraft in use while being responsible for the movements of your task force on a global scale.

Domark reckons it will be a breakthrough in flight sims, but sim pilots will have a long wait to find out. The game is not due out until autumn 1992. ■



• ***Domark's flight follow-up. Out before the plane itself?***

Police appeal for customers to help with information

CASH MOVED FROM COMPANY ACCOUNT

The accounts into which cheques for *Door to Door* were paid have been emptied and closed. And Dr Susan Watson is still refusing to answer questions posed by the Trading Standards Officers who are investigating complaints about Geographic and its appalling product.

While Trading Standards Officers across the country are still receiving complaints about the shoddy quality of *Door to Door*, it now seems that there is little more they can do – even though Watson and Gold, the people behind Geographic, may have a case to answer under the Trades Descriptions Act.

Now only the police have the power to act against Watson and Gold. But a police spokesman said if they do not receive written complaints from people who sent money to Geographic, there is little that can be done.

"If people have been sent goods that don't match up to their expectations, then it's a Trading Standards problem," a member of West Yorkshire CID told *Express*.

ON THE DOORSTEP

On Monday 29 April, Mr Attenborough of the West Yorkshire Trading Standards Office visited the Cranfield Place address that Gold and Watson used to sell *Door to Door*.

Dr Watson answered Attenborough's knock, but refused to allow him to enter. Speaking from behind her front door, Watson admitted that she had received his letter which detailed complaints about the product, but refused to discuss it saying that she had referred the whole matter to her solicitor.

When Attenborough asked Watson for details of this solicitor, she refused. She then terminated the conversation by closing the door.

It appears that there is not a lot more that the TSO can do in the case of Geographic. Attenborough said: "Unfortunately, our powers are limited as far as actually forcing people to divulge information." He was clearly sceptical about Watson's claim to have consulted a solicitor: "Whether or not she has actually done anything in that line, I'm not too sure," he added.

The chances of Geographic's customers getting a refund for the shoddy goods supplied are dwindling. Within hours of Attenborough's visit information came through from the Midland Bank that all the cash in the accounts held in the name of 'Susan Watson' and 'John Gold and Susan Watson trading as Geographic' had been drawn out just days before the injunction was obtained by *Express*.

DOOR TO DOOR
EXPRESS
INVESTIGATES

The Trading Standards Office is continuing its investigations, but is not hopeful of obtaining an interview with either Gold or Watson. "If we are not able to get any reply out of them or any commitment to refund people's money, the next step for individuals would be to try and sue them," Attenborough stated.

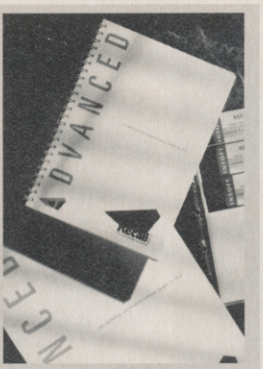
Express is continuing legal moves against Watson and Gold, but it would be unwise to reveal details at this stage. Anyone who sent money to Geographic and did not receive anything in return should write to West Yorkshire Police at Shipley Police Station, Manor Lane, Shipley BD18 3RJ. ■

PC text retrieval

Recall Plus Advanced, the latest in Insoft's range of PC-based text retrieval systems, features picture search facilities as well as enhanced text retrieval capabilities.

The system works by storing documents in a 'library' and then the user can search for documents containing certain words, phrases or, now, pictures and call up any .

The upgraded text recall facilities include being able to take into account word proximity and bracketing when searching for words, and also to look for synonyms or alternatives.



• The latest version of Recall Plus *can search for pictures and text.*

Recall Plus Advanced costs £595 while Recall Plus 3.0 user can upgrade to £75. Contact Insoft on 0272 239143.

The writings on the palm

An A5-sized, palm-top computer which can understand handwritten input is to be marketed in Europe before its US launch.

Kyocera, the Japanese company best known for the manufacture of printers, has announced that the Refalo palmtop is ready for a world wide launch this autumn.

Refalo weighs a meagre 650 grammes, comes with MS-DOS 3.22 in ROM, and has an RS232 interface for data exchange. Conventional disk drives are replaced by integrated circuit drives which take credit card-sized ROMs that can be used for data storage.

Several of these ROMs are bundled with the machine including a notedpad, address book, clock and calculator.

Animated human clip art for CAD

***Mannequin* is claimed to be the first program to generate realistic moving human forms using computer graphics.**

It offers a choice of figures representing the typical sizes and shapes of people from 10 ethnic groups and five body types.

It has been developed for use with Computer Aided Design (CAD) so that designers can more accurately portray the human form. For example, they will be able to see how well a tall person can fit into a car.

Mannequin is compatible with most major CAD packages. It is retailing for $699 in the US.

For more information call 0101-516-752-3568. ■

Accident basher out for the PC

When accidents happen at work the usual response is to find no-one to blame. Now a PC program has been launched to put an end to such sloth.

Accidata from Datas is a logging and monitor system which analyses mishaps in the workplace, and presents managers with graphs and charts which can help to locate potential troublespots.

The £700 system acts as an accident book, and can present data in a useable form. Datas' partner Jim Baker-Smith said: "Accident books are usually left in dusty corners, and information is not used properly. With this system the right people are told what actions to take, and how best to avoid other accidents."

• Accidents will happen but they don't have to any longer.

Accidata has been endorsed by the Health and Safety Executive, Trades Union Congress and Department of Social Services.

Call 081 366 5557. ■

NIBBLES

Amstrad cuts jobs

Amstrad managing director Barry Young is among 30 of the company's head office staff to have been made redundant last week. Other key staff laid off include software marketing manager Peter Roeback and director Nick Lighthowler. Seven warehouse staff also lost their jobs. A spokesman said the redundancies were mainly due to the recession, but that the removal of Young also allows Chairman Alan Sugar to take closer control of the company.

Rep organiser

Travelling sales reps will be able to keep an electronic contact management system in their pocket with Pocket Sales Force, a removable memory card for the DIP Pocket PC (also known as the Atari Portfolio). Designed for non-computer literate users it can keep customer records, schedules, general reports and details vital to reps. It costs £110, or you can buy it in a bundle with the Pocket PC for £300. Tel: 0483 301555.

Zenith is out

The Ministry of Defence has terminated its contract with Zenith because its computers do not meet new security requirements. After thieves stole a laptop containing Gulf War plans in January, the MOD introduced rules requiring all its computers should have removable hard disks. Zenith was unable to adapt its models, so the lucrative contract has now passed to Compaq who will supply a modified version of its LTE 286.

LaserJet IIIP

Hewlett-Packard has released the HP LaserJet IIIP, a compact four pages per minute printer. It has eight internal scalable typefaces as well as 14 bitmap fonts standard on all HP LaserJets. Available with 1Mb of memory, the IIIP retails for £1,099.

IBM's Soviet deal

IBM has teamed up with the USSR Civil Aviation Ministry to set up a countrywide air ticket reservation system called Sirena-3. The system, which will cost $150 million, is expected to be running by the year 2000. It will replace the current system, Sirena-2, which is based on IBM clones made in the eastern bloc.

Torpedo Sim

UK-based SD-Scicon is to supply the French Government with a powerful torpedo engagement simulation system. THOR is used to simulate scenarios with aircraft, submarines, helicopters and ships to study the effectiveness of tactical manoeuvres.

CDTV: the facts at your fingertips

According to Commodore, CDTV is not a computer. So just what is this new machine which is aimed at multi-media usage and when can you get your hands on it?

THE NAME:
Commodore Dynamic Total Vision. The machine's platform is an Amiga 500 combined with a CD-ROM drive.

THE PRICE:
£599.99 (inc VAT).

WHEN YOU CAN BUY:
CBM shipped CDTV units to major High Street retailers such as Dixons, Comet, Alders and even Harrods, on April 29. Each of these stores will require at least a fortnight to check the stock through their warehouses.

WHAT YOU GET:
One CDTV unit. One infra-red remote control unit.
Three software titles; *Lemmings*, *Hutchinson's Encylopedia* and the *Welcome* disc

CENTRAL PROCESSOR:
MC68000. Utilising 16/32-bit main CPU running at 7MHz.

MEMORY:
1Mb chip RAM.
2Mb non-volatile RAM.
512K RAM.

CD-ROM:
Sony/Philips type, capable of storing 550Mb of data. Supporting International Standards Organisation (ISO) 9660.

EXPANSION:
One Parallel (Centronics) interface.
One RS232 serial interface.
External floppy disk drive interface (Amiga compatible)
Mouse, keyboard and joystick (hardwired to act as alternatives to the standard infra-red units).
Stereo headphone input.
Optional 256K RAM card port.

MAIN CONTROLS:
On/Off switch.
Headphone volume control.
Play/Pause.
Stop.
Forward/Reverse - Scan/Skip.
Reset.

OPERATING SYSTEM:
Kickstart 1.3, stored in ROM. ISO 9660 file handler.

PERIPHERALS:
(when available)
Infrared trackerball and joystick
MIDI in/out.
RAM and ROM cards.
Genlock.
Keyboard.
Infrared, two player interface.
Modem.
Printer.

CBM's interactive multi-media machine will

CDTV LAUNCH

• *Commodore has pitched CDTV out of the teenagers' bedroom and into the living room. To add to this, the word 'computer' is avoided in marketing.*

Tuesday, April 30th, saw the long-awaited UK launch of Commodore's Dynamic Total Vision - CDTV.

A group of journalists, educationalists and software publishers gathered in London Piccadilly's BAFTA Centre to hear Commodore's managing director, Steve Franklin, introduce what his company hopes to be "the world's first consumer interactive multi-media player".

The company is bullish, verging on aggressive, in its plans to get CDTV into homes throughout the world. Franklin said: "We want to reach the 80 per cent of the public who wouldn't want a computer in their living room".

A price of £599.99 was announced, for which the consumer gets the basic CDTV unit, an infra-red remote control device and three software CDs. These are *Lemmings*, the European Leisure Award winner for best game of 1991, *Hutchinson's Encylopaedia*, and Commodore's own *Welcome* disc, which acts as an introduction to the machine.

Although CDTV is being pitched as brand new concept for multimedia and family use, its underlying technology is familiar to the computer world. Inside the slim black box, which bears a striking similarity to a video recorder, are the basic components of an Amiga 500. The CD-ROM unit used with the machine is based on a Philips/Sony design. This in itself is ironic as both Philips and Sony have been working together on the rival Compact Disc Interactive (CD-I) technology which will be the biggest rival to CDTV's success over the next two years.

However, with CD-I still a year away, Commodore is pitching its machine into a virgin market. It has actively avoided mentioning the word 'computer' in any of the literature relating to CDTV. The company sees itself as creating a new market in which users treat the machine as a 'player' that sits in the lounge and takes

CDTV v CD-I – round one to Commodore?

SONY CD-I STUNNER

EXCLUSIVE

Hand-held interactive CD unit unveiled – and there's a 'ghetto-blaster' version too page 3

at last!
schools
a bus
ting reader
curity
Tycoon
LES
Mega Drive
round-up
MEDES
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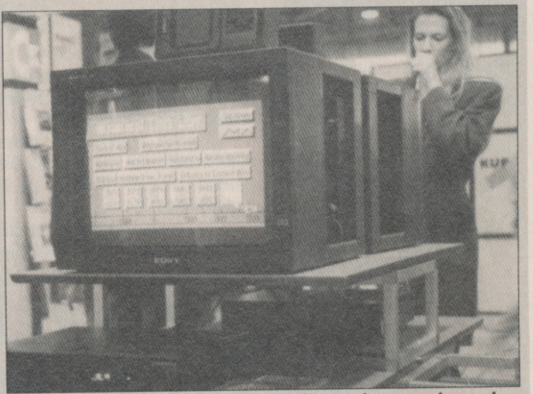
• *Express has kept a close eye on the development of CDTV's biggest potential rival - CD-I from Sony, Philips and Matsushita.*



• *Not only was CDTV launched in the UK last week, it was also on show at the prestigious Amiga '91 show in Berlin. Full report on page 8.*

When the name Sony crops up in relation to High Street sales of electronic goods, the competition quakes. It is part of 20th Century legend that the company launched a small, portable tape machine which was at first treated as a joke by the 'people in the know'. That was until the Sony Walkman swept the planet, being bought in its millions by the people who didn't care to know but who were prepared to spend money.

Following this success, Sony decided that information technology was the next step into the mass market. However, the technology did not match up to the high targets which Sony had set. Data storage, transmission and access was too slow. Compact Discs were seen as the obvious next step. To this end Sony teamed up with Dutch electronics giants Philips, and fellow Japanese high-tech, multi-national, Matsushita to develop Compact Disc Interactive technology or CD-I, as a world standard.

As yet no CD-I machines have been launched anywhere in the world although it is well known that a number of Japanese hardware manufacturers have developed prototype CD-I equipment ranging from CDTV style decks to hand-held units and 'ghetto-blasters'. The hold-up has been due to a failure to adopt a finally agreed common standard - the introduction of a single multi-media CD format is proving just as difficult to accomplish as the unfulfilled ideal of a single standard for computers. Sony was badly stung in the early 80s when it backed the ill-fated MSX standard for home computers, and does not want this to re-occur.

Already though, CD-I boasts hardware support from Toshiba, Pioneer, Technics, JVC, Aiwa and Sanyo and with both Sony and Philips owning significant chunks of the global rights to music, video and film back-catalogues, the CD-I software range will be massive.

Apparently this does not unduly concern Commodore at present. In the words of Kelly Sumner, Commodore's marketing manager: "At the moment CD-I is not a worry for us. The main reason for this is that our platform exists and there's does not".

Indeed, Philips Interactive marketing services manager responsible for CD-I, Julie Davis, confirmed that CD-I machines will not be available in the shops until next year. Commenting on the CDTV launch, she told *Express*: "It won't make any difference at all to our plans. We are building a world standard based on full-screen, full-motion video"

As this is a technical edge which CDTV is currently unable to offer, much of its long term success will depend on chipset upgrades.

Amiga CDTV drive confirmed

Existing Amiga owners will not have to trade in their machines as CBM has also released a CD-ROM drive for the Amiga series. When fitted, the drive will give CDTV compatibilty with machines such as the A500.

Marketing manager Kelly Sumner told Express : "We are aiming for a September launch for the A690 CD drive. The price ideally will be £299. Once fitted to an Amiga it will allow users to run CDTV titles."

Commodore is excited about the prospects for the drive. The company claims that by the time it is launched there will be 600,000 Amiga users in the UK, at least 73 per cent of whom will want to buy the new drive.

Commodore is not worried about the fact that Amiga owners who own A690s will not want to upgrade to CDTV itself.

"CDTV is not aimed at computer users. 19 per cent of the population owns computers; we are after the remaining 81 per cent. That's one reason we have not included a keyboard with CDTV; keyboards are the biggest cause of technophobia among new users.

"We see CDTV as a multi-media machine for the family, not a computer for the adolescent male child", concluded Sumner.

be in the shops before the end of May

HED IN THE UK

over from the television.

Commodore's planned CD releases come from over 80 UK developers and will cover a diverse range of topics, from gardening and cookery to educational packages with the Bible and *Xenon II* in between. CDs will cost anywhere between £16.99 for titles such as *Ninja High School Comix*, to £54.99 for a 'family health adviser' package called *Dr Wellman.*

A substantial number of the titles lined up for release over the next few months will be familiar to Amiga owners. They will come from games developers such as Psygnosis, Database Software, the Bitmap Brothers, and UBI Soft.

However, CBM's long term plan is not to rely on traditional software routes to the hearts, homes and pockets of the user. According to Franklin, the development of CDTV lies as much outside Commodore as in, he stressed: "We never said we'd go it alone. There is interest from outside".

Just how well will it sell?

After all the waiting, the promises and the hype, the question on everyone's lips is still: Will CDTV sell? Leaving aside the inroads the machine may make into general consumer markets for a moment, Commodore's UK managing director Steve Franklin is perhaps being a little extravagant in claiming that the £299 A690 CDTV add-on drive for the Amiga will be bought by three out of every four Amiga owners.

But in an industry increasingly tiring of software piracy, perhaps uncopyable CD will become the de facto Amiga format sooner than we think. At any rate, the quality of the titles released on CD can only benefit from the extra storage space. Of course, prices will vary accordingly, with some titles selling for as much as £54, but if anything like 450,000 A690 drives are sold then, of course, Commodore can rest assured. But the venture into high street multiples in search of the general punter will be much more difficult to pull off. For £600 is a lot of money to spend on an unknown quantity, irrespective of the promotional campaign supporting it. And this is perhaps the key. Commodore will need to push CDTV as a new form of family entertainment and educational tool very, very hard.

With credit increasingly expensive and the recession still chipping away at the change in our pockets, the prospects for a unit that costs more than the most expensive CD players, video recorders and large screen televisions can only look grim.

In the meantime, then, Commodore will undoubtedly look towards other means of getting CDTV into a nation's living rooms. Monthly rental would appear to be the answer. Do not be too surprised to see CDTV in your local Granada or Radio Rentals store by Christmas for £19.99 a month witha choice of top titles for £2 for 3 nights.

CDTV – The industry response

Commodore is obviously highly motivated towards pushing CDTV into homes, businesses and schools. But what do other, less involved and more objective, individuals think of the interactive multi-media machine? We asked three major figures for their thoughts.

Geoff Brown, MD of major UK software house US Gold, is obviously an interested party in the future of CDTV. *Express* talked to him shortly after Commodore's offical launch of the machine and asked whether US Gold would be putting its not insubstantial weight behind CDTV.

"We represent Lucasfilm in Europe, and it has been writing for the CDTV. So yes, we are supporting the CDTV through our licensors. But writing for the machine is a very time consuming operation. It would be a long process. However, there is a possibility that we will transfer some of our Amiga games to CD.

"I think Commodore has got to make sure that it pitches this at the right people. There is this ideal view of the family crowded around the interactive entertainment centre in their lounge. But the reality at the moment is that the computer is upstairs in the bedroom. Dad is downstairs watching football and son is playing computer games.

"You can't suddenly change society, and I see the CDTV as a computer rather than as brown goods. They are bringing out a keyboard after all".

We then spoke to Nigel Haydon, technical advisor to the Independent Commodore Products User Group (ICPUG). The group is well known throughout the UK as being one of the most keenly committed, and knowledgeable independent organisations dealing with CBM. Haydon told us:

"I think that CDTV is a good thing. The only limitation I can see at the moment lies with the software which is being bundled with the machine. Commodore is calling CDTV an interactive machine, but you can't really interact with it at the moment. The main reason for this is that the CDs are only any good to read, you can't actually write to them. Commodore is also selling CDTV as a consumer good rather than a computer; obviously the hardware platform is a computer so that comes as a pleasant by-product for us. So, as a club I could see us supporting it".

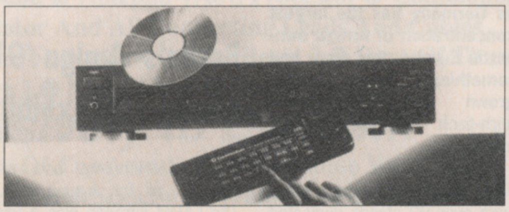
Since Commodore is pitching CDTV as a product which the whole family can use in order to both have fun and be educated we decided to speak to one of the most respected publishing houses involved in the production of dictionaries and encyclopedia. We contacted Christopher Richards, publisher of general reference books at Collins.

"We have been considering the possibility of using Compact Disc technology as a storage medium, and I have heard a lot about CDTV over the last few weeks but do not know a very great deal about it. The emphasis at this stage would be to transfer the *Collins English Dictionary* to CD. However, we would be doing this with CD-I rather than CDTV".

Next on the list was Eric Matthews of Renegade software. Renegade and the Bitmap brothers have been working on a new release of *Xenon II: Megablast* for CDTV.

"We've done quite a bit to the soundtracks. There are now six different re-mixes of the Bomb-the-Bass track *Megablast* which the user can access. We've also redone the sound effects so that they are more in keeping with the game. Game play is very similiar although the shopkeeper is now digitised. It would be interesting to develop a game from scratch for CDTV. We're also looking at CD-I, but none of the machines are actually available yet. So for us, CDTV is an excellent machine to cut our teeth on".

CDTV: Forthcoming software and prices



• Commodore Dynamic Total Vision - CDTV - software for all subjects?

Commodore claims that it has 81 developers of CDTV software in the UK alone. Although the basic unit comes with three pieces of software, CBM is hoping for 100 titles to be in the shops by September. Here is an up to date list of those titles, their prices and release dates as released by CBM:

Time Table of Science and Innovation	£39.99	Out now
Time Table of Business Politics	£39.99	Out now
Dr Wellman	£54.99	Out now
The New Basic Electric Cook Book	£39.99	Out now
World Vista Atlas	£54.99	Out now
All Dogs Go to Heaven, Electric Crayon	£34.99	Out now
Classic Board Games	£34.99	Out now
American Heritage Dictionary	£49.99	Out now
Complete Works of Shakespeare	£34.99	Out now
Illustrated Holy Bible	£34.99	Out now
Music Maker	£34.99	Out now
Barney Bear Goes to School	£29.99	Out now
Fun School 3	£24.99	Out now
My Paint	£29.99	Out now
Women in Motion	£29.99	Out now
Psycho Killer	£29.99	Out now
Wrath of the Demon	£29.99	Out now
Case of the Cautious Condor	£34.99	Out now
Battlestorm	£29.99	Out now
Animated Colouring Book	£19.99	Out now
Sim City	£29.99	Out now
A Bun for Barney	£34.99	Out now
Defender of the Crown	£29.99	Out now
Indoor Plants	£34.99	Out now
Lemmings	£34.99	Bundled
Xenon II	£29.99	End of May
Indoor Sports	£29.99	End of May
Mind Run	£29.99	End of May
Thomas' Snow Suit	£34.99	End of May
Scary Poems for Rotten Kids	£39.99	End of May
Paper Bag Princess	£34.99	End of May
The Tale of Peter Rabbit	£39.99	End of May
Mud Puddle	£34.99	End of May
LTV English	£34.99	End of May
Advanced Military Systems Series	£29.99	End of May
Many Roads to Murder	£29.99	End of May
Snoopy	£29.99	End of May
Spirit of Excalibur	£34.99	End of May
Horse Racing	£29.99	End of May
Garden Plants	£34.99	End of May
Trees and Shrubs	£34.99	End of May
Fruits, Vegetables and Herbs	£34.99	End of May
Hutchinsons Encyclopedia	£49.99	Bundled
Ninja Highschool Comix	£16.99	June
Dinosaurs for Hire	£16.99	June
Basketball	£29.99	June
Hound of the Baskervilles	£29.99	June
Our House	£34.99	June
North Polar Expedition	£29.99	June
Tale of Benjamin Bunny	£39.99	June
Moving Stomach Ache	£34.99	June
Heather Hits Home	£34.99	June
Cinderella	£39.99	June
Long Hard Day at the Ranch	£34.99	June
Drakkhen	£29.99	June
Falcon	£49.99	June
Future Wars	£34.99	June
Herewith the Clues	£29.99	June
Pro Tennis	£29.99	June
Unreal	£29.99	June
BAT	£29.99	June
Sherlock Holmes	£44.99	June
Trivial Pursuit	TBA	August

AMIGA CABARET

Berlin's Amiga '91 Show is likely to be Europe's biggest this year, attracting nearly 100 exhibitors and countless visitors including reporter Gary Whiteley...

Berlin, the renewed heart of Germany, was host to a gathering of the Amiga fraternity all of whom were intent on showing that the machine could do more than play a few games. As Germany has the largest concentration of Amiga owners in Europe, this show had something, from home-grown and international high-tech to games, for everyone.

Situated in Hall One of the AKT exhibition centre, there were over 90 stands dedicated solely to the Amiga in all its forms - from the A500 right up to the top end A3000, and including UNIX stations. Amiga traders in both software and hardware, from around the world were represented in the large, single floored, hall. Programmers were on hand to demonstrate their latest wares, 24-bit cards were present in relative abundance, German technology was strongly represented in peripherals and video equipment, there was even an on-site repair and upgrade enterprise where you could have retrofit enhancements made to your Amiga by a team of soldering-iron wielding computer doctors. And of course Commodore was there, dominating the centre of the hall with its large stand, overshadowed by a video wall showing animations and output from CDTV, which was launched in Germany at this show.

Commodore was not only showing CDTV, but also its new Unix A3000 systems, which looked impressive, especially when working with the ever-present 24-bit graphics.

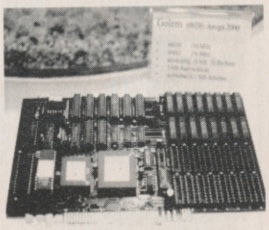
CDTV made the strongest showing but 24-bit colour, video and '030 boards were drawing the most crowds

MODERN VIDEO

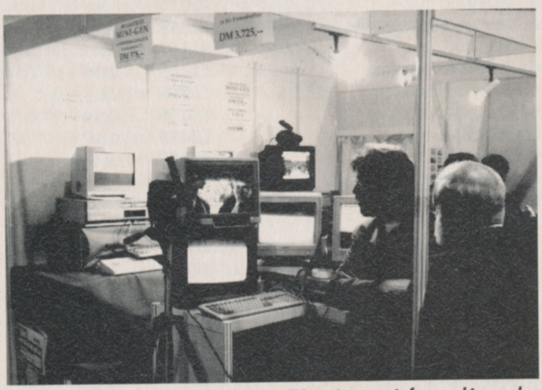
On the video side there were a plethora of mixers, processing devices, digitisers and genlock units, ranging from the purely domestic to the completely professional. This may seem strange to us in England, but not in Germany as almost every TV and cable station regularly uses Amigas to generate graphics and animation for television. The VD-4 digitiser (distributed by G2 in the UK) was able to capture a colour video image in 60 milliseconds, do time lapse, be triggered remotely and use AREXX - all for around £320. The LAMM Intragen was a very competent semi-professional genlock incorporating wipes and effects, S-VHS, digitising and other features for around £700 and, at a lower level, the pairing of LAMM's Lock-It! and Split-It! (£240 the pair) provided remarkably good, low cost genlocking and RGB splitting.

On the professional side, products such as Videocomp's G-100 genlock (a purely broadcast genlock) had very high specification, as did its VES-1 (semi-pro genlock with effects, processing and digitising - £460) and DVE-10 (genlock/mixer/digitiser with picture in picture, movement, audio mixing and picture processing - all for only £920).

The InvisionPlus/LIVE combination of software and framegrabber card was being demonstrated, with real-time video grabbing and effects, video animation playback, video source mixing under software control and many other effects. HB Marketing on 0895 444433 will distribute in the UK.



• 68030 power for only £500!



• Amiga video is huge in Germany - every TV station uses it for graphics work.

24-BITS & PIECES

It's getting more difficult to separate graphics from video, especially now that 24-bit has started to arrive in force. There were several such devices on show. M.A.S.T was demonstrating its new Colorburst unit, which was generating heavy interest, in terms of both cost (DM1199) and quality, which looked good. Unfortunately, the company didn't have any available to the public - Again, HB Marketing will be making up for this in the UK.

Further up the scale the Amiga Centre Scotland was demonstrating its Harlequin board, along with a brand new 24-bit paint program from France called *TV Paint*.

On the Merkens stand, programmer Peter Reuschling was demonstrating the VD2001 board, (also distributed by G2 in the UK) which features real-time 24-bit frame grabbing, screen mixing, genlocking and image manipulation.

Finally, on the 24-bit hardware side was another new product, the Visiona 24-bit card, claimed to be a true 24-bit card (ie non-buffered), it will work with any TV format, work in absolute real time and up to very high resolution. Commodore was actually using this board in its Unix systems. And, to cap all this 24-bit presence, there were some stunningly good graphics!

HARDWARE HEAVEN

Germany has always been regarded highly for its technological prowess, and there was little at this show to upset this idea. There were several German manufacturers present demonstrating products for all Amigas, including the ancestor of them all, the A1000.

Kupke Computertechnik had a whole range of peripherals and cards for all Amigas, including hard drives, memory boards and turbo boards. A £500 68030/68882 board with 2MB of 32-bit CHIP RAM being one of the outstanding examples. All major manufacturers were present in one way or another, with flicker-fixing cards costing around £170 and Quantum 105MB hard drives at £380

SOFTWARE CITY

Markt & Technik were showing a new version of *Reflections* (a program not yet available in the UK , although it should be, as it produces spectacular ray-traced graphics and animations) which has a host of new features including bump-mapping, Boolean operators and 3D font libraries. Another fine piece of graphics software was *Painter 3D*, from Swiss company Adept Marketing. Very fast and easy in operation, this is a modelling program set to blow the 3D market wide open. It will probably become available from August in the UK and cost around £80. A new version of *Scala* is also almost here, featuring anti-aliased fonts, scrolling, crawling, smoother transitions and a driver for the Canon Ion magnetic disk camera.

On the programming side, X-Pert Systems launched a new language called Cluster, which is compatible with Modula 2 and is claimed to run significantly faster than Lattice, or SAS as it's now known, C.

The show would seem to suggest that the traditional domain of Mac and Big Blue is most definitely threatened. For many people, the Berlin Show showed that Amiga is more than just a games machine, it's also more than well provided for in the arenas of graphics, animation, video and sound. ■

M.A.S.T.
ELEPRO

• MAST demonstrated its new Colourburst unit - 24 bit colour for £400!

THE TOP TEN ACTS

While the majority of products on show at the Berlin Amiga Show were of impressive build quality, and were demonstrated to great effect, some of them stood out. Here is the *Express*, at a glance Top 10 best from Berlin.

SOFTWARE
Painter 3D
Reflecions v2
HARDWARE
VD-4 Digitiser
Intragen Genlock
DVE-10 Effects box
Visiona 24-bit card
CDTV
A3000 UNIX

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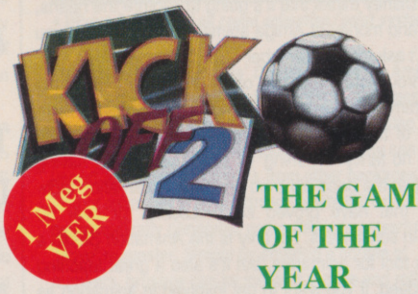

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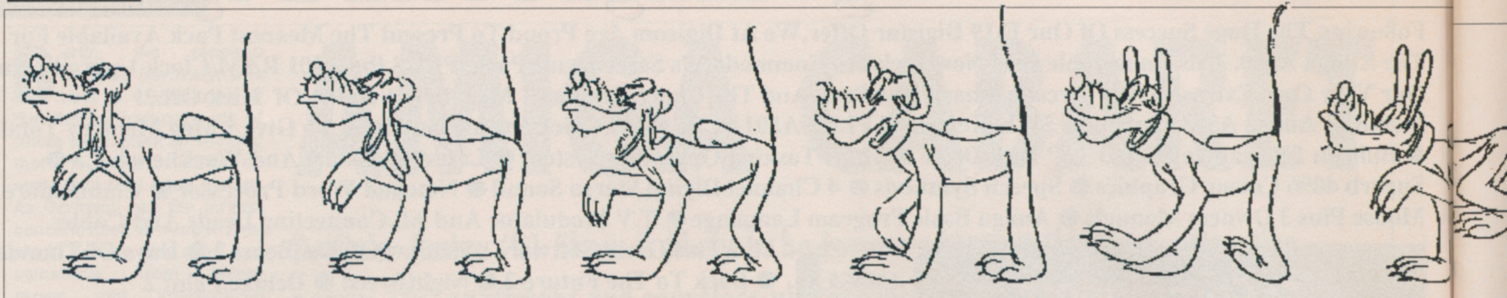


MICKEY, DON
AND THE AM

There's no doubting the pedigree of Entertainment International's new Disney Animation Studio, but is it any good? Jason Holborn finds out.

If there is one name that is synonymous with animation, it must surely be Walt Disney. It's a well known fact that the famous maker of cartoons and feature films has been tinkering with the Amiga for a number of years now, using it mainly to train would-be animators, but no one ever expected to see an 'official' Disney animation program. Well, it's here and it looks good.

The Amiga certainly isn't starved of quality animation software; indeed, some people would argue that animation is the one thing that the Amiga does best. With such packages as *VideoScape, Sculpt 4D, Fantavision* and even *DPaint 3* defining the standards of Amiga animation, the Animation Studio is in for a tough time if Disney thinks that it's going to capture the hearts, minds and money of Amiga animators. Then again, you couldn't ask for a better label.

Throughout the design of the *Animation Studio*, the programmers have tried to emulate the working techniques of the traditional Disney animator. As a result, there's no fancy 'tweening' or other such labour saving tricks, just the good old tried and tested animation techniques that have proved so successful for over 50 years. In some ways, not only is the *Animation Studio* a serious tool for animators, but it's also a great teaching tool. Indeed, if you want to get involved in animation as a possible future career, then the *Animation Studio* would be a good place to start.

MANUAL DEXTERITY

Disney
PRESENTS
the ANIMATION
studio

***• Disney's Animation Studio** uses good old tried and tested animation techniques.*

Disney has certainly gone to town with the packaging. It's a very slick affair with some very glossy and rather attractive box graphics. Inside there are two huge manuals and three floppy disks. The three disks contain the Animation Studio programs, a disk of useful animations and an impressive demo reel. The third disk isn't really needed, but it gives you a good idea of what the program is really capable of.

The first of the two manuals is rather misleading. Although it seems bulky at first, it is not until you actually flick through it that you realise only a fifth is applicable to UK users – the rest is simply foreign translations of the same text. At least the second manual is in English only, although it did give the impression that Disney had perhaps been stealing a few ideas from EA – both the writing style and even the layout is almost identical to that used within the *DPaint* manual, although that's not necessarily a bad thing. With plenty of illustrations and some clear factural text, you'll find the manual a joy to behold.

GETTING YOUR BACKUP!

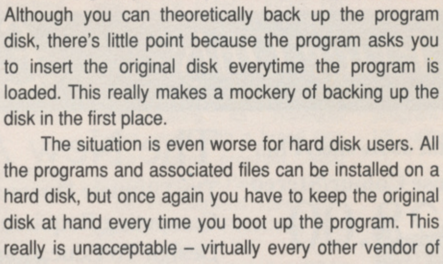
Before we go any further, just a note on copy protection. Although you can theoretically back up the program disk, there's little point because the program asks you to insert the original disk everytime the program is loaded. This really makes a mockery of backing up the disk in the first place.

The situation is even worse for hard disk users. All the programs and associated files can be installed on a hard disk, but once again you have to keep the original disk at hand every time you boot up the program. This really is unacceptable – virtually every other vendor of serious software has dropped copy protection on such 'professional' products, so Disney would be well advised to take note.

MIGHTIER THAN THE SWORD

The Animation Studio consists of two separate programs which reflect the working practises of the traditional Disney Animator. The first, *Pencil Test*, emulates the first stage of the animator's profession. For those of you who aren't familiar with the working practices of an animator, Pencil testing basically involves drawing up the animation 'rough' by sketching it on to transparent paper called 'onion skins' (it's glorified tracing paper, really).

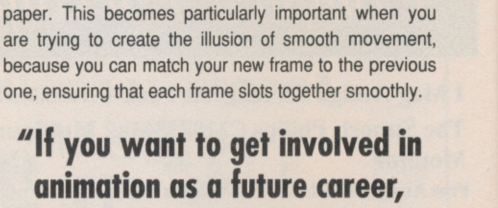
If you've ever used tracing paper, then you can probably already appreciate why such a system is used. Put simply, because the paper is transparent, when you place a new piece of paper on top you can see any frames that you have drawn previously through the paper. This becomes particularly important when you are trying to create the illusion of smooth movement, because you can match your new frame to the previous one, ensuring that each frame slots together smoothly.


Cel 7 of 167

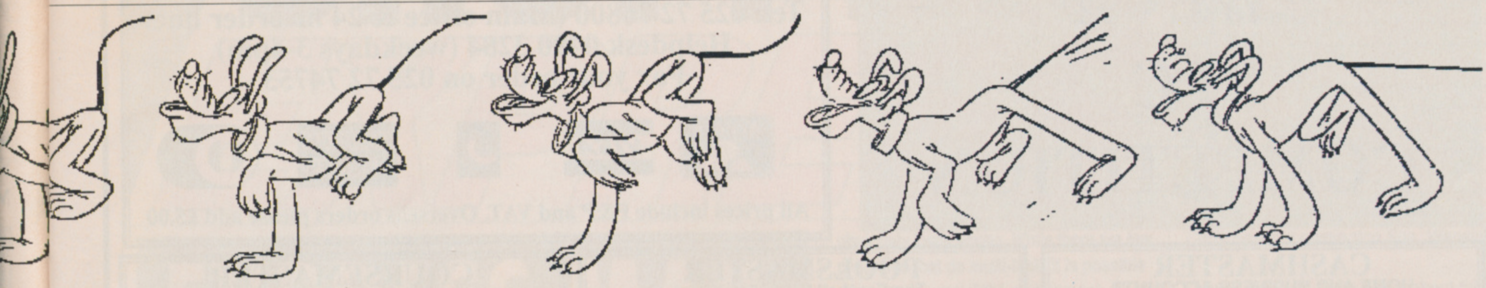
***• Pencil test's** onion skin facility in action. Note how previous frames are rendered in progressively lighter shades of grey.*

> **"If you want to get involved in animation as a future career, then the *Animation Studio* would be a good place to start."**

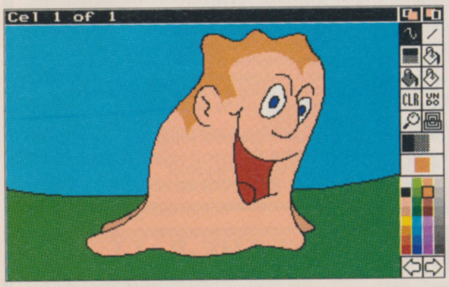
Disney has successfully managed to emulate this way of working within the Pencil test program. Each new frame is drawn in black ink, but as you advance, previous frames are rendered in progressively lighter shades of grey. Although they are displayed as one bitmap, each frame is completely independent of any other frame, so you still have to draw in any static objects you may have within your animation. If you're used to *DPaint*, then you'll probably find things to be rather long-winded at first, but you'll probably end up swearing by it after a few hours use. *DPaint* always leaves you guessing when drawing animations up frame by frame, but this onion skin system is much better.



• Now that you've drawn and painted your animations you can pull all



ONALD MIGA



• *Once you've roughed out your animation, it's time to add some colour with the Animation Studio's Ink&Paint program.*

COLOURFUL CHARACTERS

Once you've draw up all the frames that make up your basic animation, you can display it in all its monochrome glory within the Pencil test software. However, you'll probably want to add a dash of colour, which is where the Animation Studio's *Ink & Paint* module comes in.

If you're bit of a *DPaint* fan, then you'll feel instantly at home with *Ink & Paint*. It's got a long way to go before it matches the capabilities of *DPaint*, but it's ideal for the task in hand. You can use up to 32 colours in low resolution or 16 in high, but don't forget that animations eat memory, lots of it, so it's best to restrict your colour palettes as much as possible. If you need extra colours, then you may well be advised to think carefully about using the lowest possible resolution to conserve as much memory as possible.

In true Disney style, each frame must be individually painted in using the supplied tools. You can also touch up frames, adding shading and perhaps making alterations if need be. *Ink & Paint* is a fairly simply affair, but there's no doubt that it does the job that it was designed to do.

LIGHTS, CAMERA, ACTION!

Finally, you can pull together your animation using the program's powerful exposure sheet facility. If you've never used an exposure sheet, it allows you to dictate the running order of frames within your animation. You can cut, copy and paste frames, allowing you to extend or reduce the length of the animation by doubling up or removing frames. The program defaults to running frames 'on twos', a well known animation technique which allows animators to save time by drawing only half the number of frames required for each second of an animation. To slow things down further still, you can adjust this doubling up to anything you require.

For a complete production, your animations can also take advantage of music in standard IFF SMUS format (*Aegis Sonix* and *Deluxe Music* will create SMUS files). Once again, if you've got a machine with limited memory, you may find that adding music is the straw that breaks the camel's back. If you're lucky enough to have an Amiga with something like 9Mb of RAM, then at least you know this feature is there.

AT YOUR DISPOSAL

The Animation Studio will run on a bog standard 512K Amiga A500, but it's at its happiest when run on a machine with a couple of megabytes. With this kind of memory at your disposal, you can create some impressive animations, complete with colour and even music.

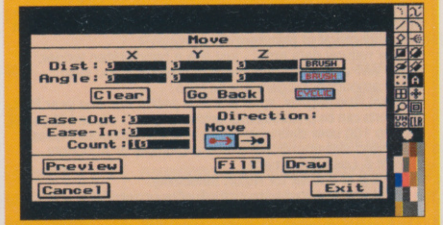
> **"Powerful enough to keep the hardened user happy, but easy enough for the greenest of animators."**

It's hard to define the market that the Animation Studio wishes to address. With Disney's name behind it, it's got the potential to be a serious tool for the professional animator, but it is still lacking in several areas. However, as a tool for the home animation enthusiast, Disney's Animation Studio is an absolute boon. It's powerful enough to keep the hardened users happy, but easy enough to learn for even the greenest of animators. In all, it comes highly recommended. ■

Disney Animation Studio *costs £99.95 from Entertainments International. Telephone 0268 541212.*

THE ANIMATOR'S CHOICE

DELUXE PAINT 3



• **DPaint 3** ***is a good all round animation/paint system.***

Not only is Electronic Arts' *DPaint* system the Amiga industry standard paint system, but it also happens to be a very capable animation program. Supporting standard ANIM-format animation files (so you can both import and export your work from other packages), *DPaint* animations can be drawn 'freehand' or mathematically generated using *DPaint's* powerful 'Move' requester. Simply by entering a couple of numbers, brushes can be made to tumble and roll in true 3-D perspective.

If you want to get involved with animation, but don't already possess a copy of *DPaint*, then this is the one to go for. It may not be quite as powerful as its competitors where animation is concerned, but nothing can touch it as an all round performer.

FANTAVISION

It's been around for years now, but it's still one hell of a good package. Unlike most animation systems, *Fantavision* employs a system of polygons which undergo mathematical transformations which can be defined by the user.

Broderbund calls this system 'tweening', which standards for 'In-Betweening'. The reason for this is that you only need to tell *Fantavision* how an object looks at the start of a transformation and how it looks at the end of the animation. The program then generates the frames 'in between'. Clever eh?

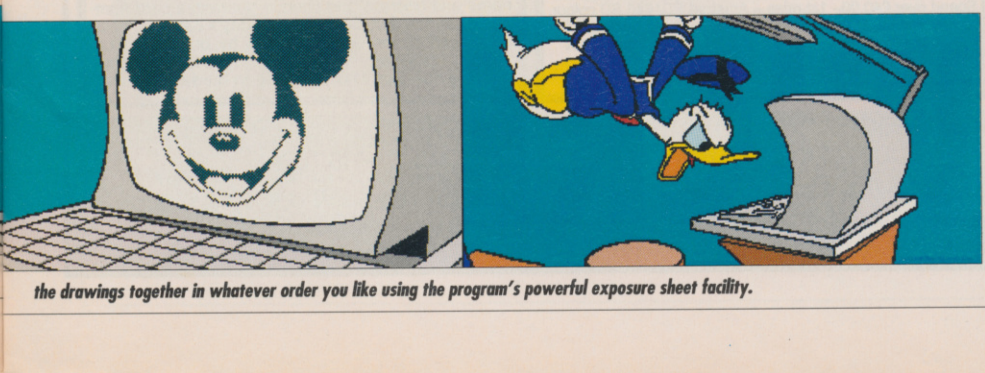
In reality, *Fantavision* animations have the disadvantage of being rather lacking in detail. However, if you want results with a minimal amount of work, then *Fantavision* could be for you.

VIDEOSCAPE 3D

Aegis' acclaimed 3-D system may be a real pig to work with, but there's no avoiding the fact that some pretty amazing animations have been produced using it. *VideoScape* has a torturous user interface and totally illogical way of working, so can only be recommended to those who enjoy mind blowing packages.

SCULPT-ANIMATE

Originally designed as a package for producing static ray traced images, Dr Eric Graham updated his renowned program to include animation facilities. Each frame takes many hours to generate, so don't expect to see instant results. If you're prepared to persevere though, the results really are worth it.



the drawings together in whatever order you like using the program's powerful exposure sheet facility.

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EXPRESS MAIL

Write and tell Haydn Fitz-Williams what you think! Reach him at: *Express Mail, 30 Monmouth Street, Bath BA1 2BW*. Sorry, no personal replies, even with an SAE and remember, only SOME letters win a fiver!

Let's kill Davey

Who, or should I say what, is Neil Davey? Is he human? I don't think so ... I have taken a total dislike to him. He has taken your magazine to a new low. I still treasure my first copy, in fact all my copies, but this prat's got right up my nose.

I don't want to enter a combat situation into which what or why (eh? - H F-W) **but perhaps you should rename your magazine N*ew Amiga Computer Express* in the light of all the recent articles and adverts the mag has run.**

Rodney Birchall, Preston Lancs

Now there's an idea. NACE. With the number of Amigas being sold and the number of new Amiga products released these days it would be a guaranteed hit. But I think you exaggerate somewhat. As for Mr. Davey, well there's quite a few correspondents who would like to make some pretty graphic changes to his user interface. Read on....

A load of OS 1

I feel that your recent article on WIMP interfaces was considerably lacking in balance. In it, you compared various WIMPs with each other and eventually awarded a rating. All the latest versions of these interfaces were tested, except for GEM. You spoke of Apple's System 7, of the Amiga's Workbench 2, and of the brand new NeXT machine, yet the latest developments in the ST's interface (TOS 2.05) were completely ignored. In addition, erroneous statements were made, such as claiming that it was not possible to alter the colours on an ST desktop.

Positive points of the ST were also ignored - you state that the Amiga is similar to the Mac because it is possible to draw a box around files, but no mention of that capability was made in the ST section.

In general, I do not comment on machine comparisons, however in this case I feel that the descriptions given were so misleading that such a comment is necessary.

I C McCall, Lancs

A load of OS 2

What does Neil Davey mean by '..garish colours you can't alter' on the ST? I'll just scrap this here control panel desk accessory then, as my eyes must be going. I could have sworn that I could select the colours I wanted for the desktop. And '..wasn't designed for multi-tasking... isn't any at all..' Here was me thinking that DA's that format while you are working away was multi-tasking, obviously I was wrong. While there are few programs that do multi-task, it is possible under the normal GEM environment. As for the menu buttons, well, each to their own. I find it perfectly acceptable to use drop-down menus, and I don't like pull-down ones. Just habit, it doesn't make Windows 3 crap, nor does it make GEM the be all and end all.

Gavin Syme, Edinburgh Scotland

A load of OS 3

Not such a great article. GEM doesn't deserve such a panning; it works, no more, no less. If you want to see a *really* hideous GUI, look at Suntools on a Sun 386i. Blecch is not the word for it!

Stewart Russell, Glasgow, Scotland.

A load of OS 4

Not the only one who thought the review of the ST OS was straight out of a text book. (says he who uses NEODESK anyway). However the review was one of the worst I've read for a long time. Not particularly subjective nor objective.

Q: Does the reviewer have an Amiga?
A: Suprise me?

Richard Gorbutt, High Wycombe, Bucks

Rather than leap to the defence of the indefensible Neil Davey I'll pass you straight to the next letter

The solution?

I would like to know about other GUI systems, but unfortunately the lack of space prevented you from going into any great detail. I don't suppose there is any chance of some more detailed articles, perhaps written by experienced people who have been using each system for quite some time? After all, you can't expect one person to be fully familiar with seven different systems....can you?

Chris Eason, Leamington Spa, Warwicks

I had a chat with Andy Editor about this whole sorry business and he was down in the dumps mumbling something about 'more objectivity would've meant a whole rewrite - not enough time - it was Davey's personal view' etc, etc. Privately, though, he admitted it was the worst article we'd ever run. Somehow I don't think you'll be reading any more features by Mr.Davey.

So your suggestion asking for experienced GUIers to contribute their own in depth articles was met with some relief. Any such experts out there should write to him right away. There's around twenty fivers waiting for the best synopses.

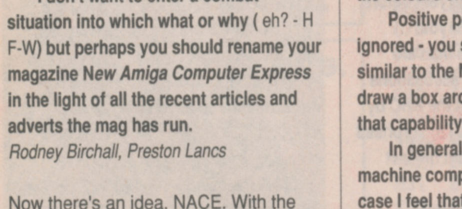
On-line mail

Own a modem? Then squirt us a letter. *Express* has its own conference on CIX. Why not give this on-line service a ring on 081-390 1244 and talk to us direct! You can also leave E-mail for us on Prestel and Micronet - get in touch on 011112623, or on Telecom Gold @84:txt152

The best ever program

Hurray for *Door To Door*, it's the best program I've ever bought. I don't understand what all the fuss is about. I use this regularly in my line of work and find it to be an essential aid.

Through using *Door to Door* my income has trebled, now I can afford three foreign holidays a year and as many luxuries as I want. Admittedly it's a little slow at calculating routes, but the financial end makes the delay very worthwhile. I



• Now we don't want to start a competition here but this just has to be seen to be believed. It's a listing of all the games that a single pirate has copied. There are 657 included and we couldn't find one release that's missing...

The shocking truth

Enclosed is a list of my latest software titles for the Amiga 500. Please print this letter, because I'm addicted to swapping pirate games. I haven't paid out for a game for over 18 months. Thanxs. Great Mag. Please help.

Anonymous

I took the trouble to count all 657 games on this list and a quick sum on my Mac FX's DA calculator tells me that you have amassed nearly £16,500 worth of games. If, at a conservative estimate, you have passed these on to ten friends then you personally have cost the software industry a fortune. No wonder there are organisations bent on convicting you of theft. You deserve everything that'll one day come to you. You don't need help you need grassing up.

Are you listening FAST?

If FAST wish to clean up piracy, perhaps it should place an ad in your Express free ads section. Since I placed an ad there I have had pirates phone me up, send me catalogue disks and even send me 'free' samples. It"s hardly a secret world is it?

D Smith
Wisbech Cambs

A neat idea and one which wouldn't cost FAST a cent. But then again, how do we know FAST isn't already doing it? Now, there's a thought. Personally I reckon, it's about time FAST began to make some serious splashes in the Press. Justice has to be seen to be done.

can't believe why others don't appreciate it!! By the way I'm a long distance taxi driver
Donna Brown, North Shields, Tyne & Wear

Door ditto door

Do you think you could ask *Door to Door* for directions from Peterborough to London as I've got to there next week and don't really want to.
R J Roweth, Peterborough, Cambs

RISC Mac memo

Your story last week about Motorola's new RISC chips being downwardly compatible with its 68000 series chips is inaccurate. The 68K series is the prime example of a complex instruction set so if we are to take 'compatible' literally, it's impossible for a reduced instruction set processor to run complex instructions.

What you should have pointed out was that the RISC processor may be able to emulate a 68K chip in either software or firmware. Presumably this is how 'compatibility' with the Intel '86 range would be achieved. However since you omitted to include the projected speed of the RISC, it's difficult to know whether such emulation would be of any effective use.
Stuart Wrigley, Bath , Avon

Point taken Stuart. Presumably Apple is convinced the chip will allow real emulation at sufficient speeds. Still I'm told by the news boys there's not much information on this other than what appeared in the story so we can't say for definite.

All change

Thanks for your piece on the Which? Show which I couldn't afford to go to - £10 is a bit steep for entrance unless it's on expenses eh?

But all this business about a new 486SX is frightening. I mean it only seems yesterday that a 386SX was launched. I guess we can soon expect to see a 586 announced just as the 486SX gets firmly established. What's the poor old punter supposed to do?
Mark Riley, Southampton

Yes it does all seem somewhat relentless. That's the pace of change though. Meanwhile, all the potential PC purchaser can do is buy now. None of it shows any sign of slowing down.

More SAM samples

I have read through issue 129 and would just like to say to Mr O'Connor's remarks in his PD column from issue 127 that he talks completely through his exhaust when he refers to the excellent SAM coupé as (etc, etc, etc – H F-W) **....So why don't you buy one like the rest of us have too, instead of relying on the generousity of SAMCO to give them away for free!Then and only then will you see for yourselves what a stunning piece of kit this machine really is.**

(Anyway, judging by your reply to Simon Cooke, issue 129, you appear not to be bothered to read all of our mail right through)
S C Greenfield, Lincoln

That's not strictly true SC - as you can see I missed out quite a considerable chunk from the middle of your letter. This isn't because I couldn't be bothered to read it but because I was so impressed with the multi-colour output of your printer.

Seriously though, thanks for your letter, but I still don't think *Express* as a collective editorial has ever run down the Coupé. Maybe that isn't the case with the opinions found in the PD column but surely you're not saying we should restrict what people think?

NASA nasties

I have never written to a magazine before, but I felt compelled to respond to your tasteless coverage of the *Space Shuttle* game.

It was neither witty nor intelligent to include a picture of the exploded Challenger with the otherwise informative story. And the caption "how not to play *Space Shuttle*" was disgusting and crude.

It is only five years since seven astronauts lost their lives (including one civilian woman) in the Shuttle disaster, and I see no excuse for making light of the tragedy.

I feel sure many of your readers will agree with me, and I trust that, in future, you will refrain from his childish and base behaviour.
Brian Locke, Cambridge

As you know journos have a reputation of being a bunch of cynical hacks so when I showed this letter to the *Express* crew I had to contend with the likes of 'What does NASA stand for?' - answer - Needs Another Seven Astronauts, ' What were the Challenger crew's final words?' - a choice of answers here - ' Go on, let her drive', ' What's this button for?' and ' Can anyone smell petrol?' But the worst was undoubtedly 'Where do shuttle astronauts go on their holidays? - answer - 'All over the Caribbean'.

Are there no depths to which these people will sink? (*err..just how deep is the Gulf of Mexico? -Ed*)

Gizza job

Tell us about the job advertised in The Guardian last week?
Bill Harcourt, Wembley, London

Well Bill we're after a Features/ Supplements Editor to replace Tim Smith who's replacing Colin Campbell as News Editor. After manning the News desk since issue 0, Col's off to join Amiga Power as Deputy Editor.

The job advertised is for a talented all-rounder with knowledge of home computing who wants to write and sub on Britain's brightest etc, etc. No-one's told me the salary on offer but you should never ask about the wage in advance anyway as it's bad form. But it's a great opportunity so get sending those CV's to Graeme Kidd, at the usual address.

Intelligent users

I was suprised to see R P Brenchley in letters issue 129 mentioning 'Intelligent Computer Users' in his tedious letter. In view of the fact that he operates a User Group with a computer system that will only allow access to its membership on entry of a reference number, I would have thought that the concept of an 'Intelligent Computer User' was something considerably beyond his intellectual grasp. Needless to say, The Independent Spectrum and SAM User Group's 'Intelligent' computer system does not stop the proprietor cashing a cheque on immediate receipt, nor does it seem to allow the facility to send a refund to those who do not receive any Newsletters, when they don't keep a record of their membership number from the year before.

The ludicrous attacks on your columnists by this ridiculous man are comparable to the deranged accusations of political imbalnace against the BBC by members of the Loony Right. I'm surprised that you even bothered to print his last letter
M C Pope,, Walthamstow, London

Even though I'm not familiar with Mr Brenchley I could tell by his last letter that he was a little - how should I say this - unduly aggressive in his attacks.on our columnists. Doubtless though I'll get it in the neck again for showing some perceived anti-SAM bias, but it does seem something of a fuss about nothing. I await Mr.Brenchley's considered reply with relish..

Niagara falls up

That geezer whingeing on about readers phoning him trying to knock him down in price last issue - is he for real? I laughed me Niagara Falls off about that one.

The free ads are the best bit in NCE to read as there are some brilliant cock-ups. No phone numbers, total gobbledegook and some real howlers. I noticed that in issue 129 you've got it in some semblance of order, much better. Keep up the good work, the ads are a good read. P.S. Remember Pop!
D Magill, Cheltenham, Glos

Are you for real? I was knocked over though when I saw someone selling a NeXT in our free ads - I agree they are a good read. But half the gobbledegook is readers not including phone numbers and missing out crucial words. ■

WRITE A LETTER AND WIN A GAME SHOCK

HYDRA
TENGEN
DOMARK

I don't believe it. We're now in our third week of giving away free full price games to the best letters we receive and there hasn't been one request . What's going on? Don't any of you ever relax? Undeterred, I'll list this week's titles up for grabs and hope some of you actually get round to specifying the game you'd like to win should you write the greatest letter ever received in the history of *Express* (this week).

So here's the five massively hot hits for this week :

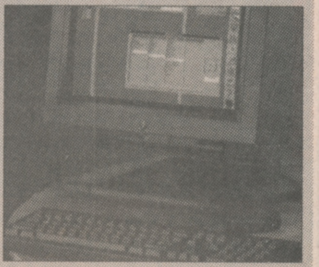
● ATARI ST & AMIGA - DOMARK'S brilliant coin-op coversion - *Hydra*
● COMMODORE 64 - IMAGE WORK'S *Passing Shot*
● AMSTRAD CPC - ZEPPELIN'S *Jocky Wilson's compendium DartsS*
● PC - Infogrames' *Welltris*

And NeXT again...

I would like to put myself forward as your official reviewer of the NeXT machine. I would only need about six months free use of the machine to get to grips with it, and my rates are entirely reasonable.

When you receive the hardware please forward it to this address: Mr. P.Jones, PO Box 660, London.
P Jones, London

Of course, we'll be in touch just as soon as it arrives. Oh, and keep it when you've finished.


• A free NeXT machine is on its way to lucky Mr. P Jones just as soon as it arrives...

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Amiga

IT DOES MORE THAN BLEEP

Commodore US certainly seems to have got its act together. It seems that finally, after years of abstract marketing and unfathomable decision making, the brains at Commodore HQ at Westchester are starting to realise the Amiga's full potential.

We already know that Commodore has been making serious inroads into such vertical markets as Desktop Video, Multimedia and DTP, but it seems that Commodore is finally starting to exploit the Amiga's obvious potential as a serious tool for the professional musician. With such software as Microlllusions' *Music-X* and Dr T's *KCS 3.0* flying the Amiga flag (a flag which Commodore should have bore years ago), Commodore too looks set to get in on the act with the launch of a dedicated MIDI extension to the Amiga's Exec system.

According to a well known Amiga developer in the States, Commodore is currently working closely with Dr T's software on a OS level MIDI manager similar to Steinberg's M-ROS system on the ST and Apple's Mac-based MIDI manager. This system will allow for previously incompatible MIDI applications to run concurrently, sharing data if required.

With such activity on the music front coming from Commodore, it seems only a matter of time before the company produces an Amiga with built-in MIDI connectors. Already the CDTV has them, so it would seem only logical that Commodore would wish to encourage support for MIDI-compatible products by making MIDI a standard fitting on the real Amigas.

With MIDI interfaces being sold by third party vendors for little more than £25, such an addition would hardly effect pricing (especially when produced in the kind of numbers to which Commodore is accustomed).

UK SLOW TO FOLLOW

Meanwhile, Commodore UK still seems to be completely ignoring the Amiga as a musician's tool. OK, the company enlists the services of a muso to show of the Amiga at Commodore Shows (Courtney Pine being the most famous), but there's still little in the way of promotion elsewhere. Even packs such as that given away with the A1500 PHC seem to completely ignore the musical capabilities of the Amiga.

Commodore is getting it right as far as graphics are concerned (Electronic Arts' *Deluxe Paint III* was a great scoop), but what about music? It's not until Amiga owners buy a game or a demo do they realise that the Amiga can actually produce more than just a couple of PC-like monotone beeps!

It's quite shocking how little attention Commodore seems to be taking of the music market. While the company is investing an awful lot of resources in an attempt to oust Apple from the DTP throne, Atari is left unchallenged within the music industry. Yet again, it's a case of the Amiga is Commodore's best kept secret. The vast majority of professional musos

PD DEMOS PICK OF THE WEEK

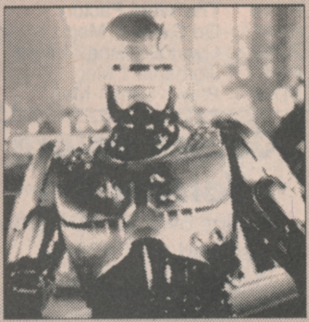
If you want to see what the Amiga is really capable of, you won't go far wrong if you treat yourself to some PD demo disks. With loads of memory to waste on fancy effects and superb music and animation, demo coders can go to town creating demos that push the Amiga to its limits. Some of the greatest Amiga programmers started out as demo coders, only moving on to produce commercial products after honing their skills on the PD circuit.

Thanks to the lads at Seventeen Bit Software, I shall be taking a weekly look at some of the very latest disks from the Amiga demos scene. I've seen more than my fair share of scrolly text demos, so you can be sure that the demos that I feature are well worth obtaining. You can buy them for £3 per disk from Seventeen Bit software on 0924 366982.

BLONDE BEAUTIES (Disk 988) – This is definitely one for the pervies amongst you. As the name suggests, this is a slideshow disk containing a selection of high resolution HAM pictures of rather appealing young ladies in tasteful poses.

ROBOCOP 2 (Disk 994) – Another slideshow disk, this time containing digitised stills from the recent *RoboCop 2* movie. See officer Murphy in all his metallic glory on your Amiga screen.

BLUES BROTHERS (Disk 973/4/4b) – If you're cool, then you're into the *Blues Brothers*. This three disk demo contains the classic *Blues Brothers* track *Everybody Needs Somebody* digitised for your listening pleasure. It's a bit limited in the old lasting interest department, but then you probably won't care if you're a *Blues Brothers* fan.



• Demos can really show off the Amiga's capabilities to their full, especially in terms of music and graphics. This grab comes from a RoboCop demo disk.

AMY THE SQUIRREL (Disk 976) – In this 2Mb MovieSetter animation, our furry friend Amy takes a trip to the cinema with her boyfriend. Unfortunately, watching the film is the last thing on his mind! It's takes an absolute eternity to load, but it's well worth it just for a chuckle. Highly recommended.

JUGGLER 2 (Disk 975) - After nearly five years of obscurity, Eric Graham's *Juggler* has returned to co-star in this latest demo. It doesn't quite feature the same state of the art ray traced graphics, but it's a goodie none the less.

don't even know the Amiga exists, and half of those that do think it's just a games machine!

AMIGA ON TV

Did any of you get a chance to catch that program on Cyberspace which was shown on BBC 2 on Monday April 29? As you may remember, the program featured heavily a Cyberspace convention that had all manner of weird people playing around with expensive computers within dimly lit rooms.

If you had looked very carefully, you may well have caught a glimpse of an Amiga 2000 running the infamous Mandala system. The system was being used by a rather hairy cyberpunk who was playing an onscreen drum kit by waving his hands about. By the magic of virtual reality and, the Amiga monitored his movements, registering when the user hit one of the drums, therefore playing an Amiga digitised sample. Freaky stuff!

I felt that that the program was very good and provided a most fascinating look into a area of computing that the Amiga is playing a vital role.

TIPSTER GETS NEW HOME

Amiga owning gamblers should be interested to learn that Steve Marriot, programmer of the infamous *Tipster* horse racing prediction program, has left TAM Marketing to form a new company, Sidmouth Software.

Based in Sidmouth (surprise, surprise), the company will handle the development, marketing and distribution of Steve's acclaimed range of applications software. This now includes a total of seven different programs including *The Tipster* (horse racing), *The Punter* (Pools predictions), *The Dogs* (Greyhound racing), *The Bookie* (odds calculator), *The Slimmer* (computerised dieting – I could do with that myself!), *The Merchant* (small business programs) and *The Padlock* (a software and hardware package designed to protect your valuable data.

Steve's first new product under the Sidmouth Software label will be *The League Manager*, a program written with the co-operation of the Football Association in Gwent. The program enables you to control up to sixteen teams in five leagues, printing out fixtures and league tables when they are required. Already the program is being used by a number of league authorities involved in such sports as five-a-side football, pool, billiards, netball, snooker and golf.

You can expect a review of the *League Manager* within this column as soon as Steve gets a jiffy bag written out, stamped and posted to me care of *Express*. In the meantime, you can find out more by telephoning Steve direct on 0395 577884.

CHECKMATE CORRECTION

I would just like to take this opportunity to point out that the new Hippo expansion system, IQLR Tower and A1500-Plus are being manufactured exclusively by Checkmate Digital Ltd and not A1500 Ltd as was incorrectly stated in *Express* issue 129. However, the existing A1500 'Shell' can still be bought from either.Sorry for any inconvenience caused.

Jason Holborn

ST

WHAT A CAD

Touting its Computer Aided Design (CAD) as having "power without the price", Microdeal is set to wake up the comatose CAD market. *Master CAD* is a three dimensional drawing program which enables the user to project a two-dimensional figure into a three-dimensional image.

The program uses a standard click and point interface to let you control the drawing's variables and parameters. Any view of the object can be chosen and projection planes can be defined.

One of the best features of the package is its ability to use pre-created images to build more complex drawings. An 'auto-dimensioning' function means the ST can calculate the exact distances between points in a drawing, saving time monkeying around with rulers.

Images are drawn on a scrollable window which means that you can create drawings far larger than your actual monitor size; in effect more than 4000Km in each direction. *Master CAD* costs £29.95 and is available from Microdeal, PO Box 68, St Austell, Cornwall PL25 4YB. Telephone 0726 68020.

CAST OFF YOUR DESKTOP

Regular readers of this column may recall my mention of two new American utility programs called *Maxifile 3* and *Hotwire*. I've managed to get hold of these two programs and have been using them for a week now.

Hotwire is a very flexible program launcher. The program, which can be autorun, consists of a menu and GEM bar front-end. The idea is that you fill each of the 54 slots with programs. Then it's simply a case of clicking on the appropriate program and launching (ie running) it.

Placing a program in an empty slot is simply a case of clicking the left mouse button on the particular program you want, then pointing to the program's location on your disk. Each of these launchable programs can be assigned a hot-key which means you can do away with the mouse altogether. I've encountered no compatibility problems with programs and find the whole arrangement infinitely preferable to a standard icon click/point desktop.

Maxifile is Codehead software's file manipulation program. With this running you can perform hundreds of functions on your files via a dual display front-end. The main screen shows a source disk directory and a destination disk directory. Copying or moving files is simply a case of opening the correct directory, clicking on the file and hitting an icon.

With *Maxifile* running, there really isn't anything you can't do to a file. For example you can modify its attributes, give it a fast load byte, copy it, yet tell the program to retain the original

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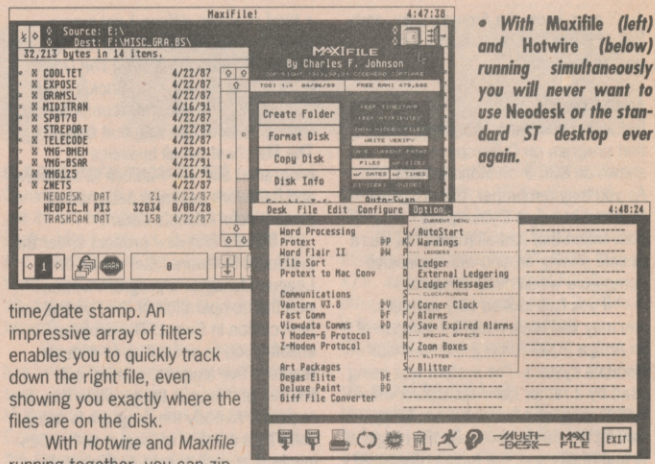

• With Maxifile (left) and Hotwire (below) running simultaneously you will never want to use Neodesk or the standard ST desktop ever again.

```
MaxiFile!                                        4:47:38
Source: E:\
  Dest: F:\MISC_GRA.BS\
32,213 bytes in 14 items.
 COOLTET                4/22/87
 EXPOSE                 4/22/87
 GRAMSL                 4/22/87
 MIDITRAN               4/16/91
 SPBT70                 4/22/87
 STREPORT               4/22/87
 TELECODE               4/22/87
 YMG-BMEM               4/22/91
 YMG-BSAR               4/22/91
 YMG125                 4/16/91
 ZNETS                  4/22/87
 NEODESK  DAT      21   4/22/87
 NEOPIC_H PI3   32034   0/00/28
 TRASHCAN DAT     158   4/22/87
```

```
Desk  File  Edit  Configure  Option                  4:48:24
 Word Processing            U ✓ AutoStart
 Protext                 P  K ✓ Warnings
 Word Flair II           W  P
 File Sort                  U   Ledger
 Protext to Mac Conv        D   External Ledgering
                            U ✓ Ledger Messages
 Communications             S
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                            T
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 Deluxe Paint            D
 Giff File Converter
```

time/date stamp. An impressive array of filters enables you to quickly track down the right file, even showing you exactly where the files are on the disk.

With *Hotwire* and *Maxifile* running together, you can zip between the two at the click of an icon. Since installing them on my hard drive I can honestly say that I never want to go back to *Neodesk* or the simple desktop. The Codehead range of software is available from System Solutions, Unit 19, Sumner Workshops, Sumner Road, London SE15 6LA. Telephone 071 252 7775.

BUDGET BONANZA

The ST budget games market has taken off in the last couple of months. Initially this meant you got pretty poor games for your five quid, but lately things have started to change. The main software houses, such as US Gold and Ocean, all have their own budget games divisions which release popular games at knock down prices. However it's Mirrorsoft's budget arm which consistently releases the best games.

Mirror Image released *Carrier Command* and *3D Pool* last month while this month it is releasing the storming *Xenon 2* from the Bitmap Brothers.

Xenon 2, is quite probably the best shoot-'em-up ever to appear on the ST. It has everything; stonking sounds, dazzling graphics and blistering gameplay. It's also, unfortunately, extremely addictive. If you missed it first time round, then check it out. The game will be available by the time you read this, priced £9.99.

LAW ABIDING ST

One of the most interesting areas of the public domain scene on the ST of late has been the proliferation of high quality sampled demos. Two of the latest are *Megablast* and *Shamen*, available from Riverdene PDL. While these are both extremely well pieced together and of the highest quality, one thought keeps bugging me: are demos like this illegal?

I mean, it's illegal to tape a record, right? It's also illegal to make money from duplicated tapes or music, right? So therefore isn't it illegal to sample a pop song, stick the whole thing on disk and release it into the public domain?

Two points arise from this. First, because it is the public domain, the actual authors aren't making any money from the disk. However the PD libraries (contrary to what they might tell you at computer fairs) are doing very nicely thank you from the whole demo scene. Therefore certain individuals are making money from duplicated music.

Now, the whole sample debate has reached a peak of late, because of the widespread use of sample bites in pop songs. I feel that short snippets used in songs, like say a drum sound or a female screech, should be allowed to be sampled. However the demos that I'm referring to aren't short snippets, they're the whole blimmin' song.

With the cost of samplers dropping in price rapidly and the ST's hardware constantly getting upgraded, it isn't hard to envisage a demo scene in a few years vastly different to the one we see today, a demo scene in which it isn't worthwhile going out and buying a CD because you can buy the demo and listen to it in exactly the same, or even better quality, on your ST.

Perhaps, in a few years time, record companies will start releasing their latest songs on 3.5 inch ST disk format, as well as CD. Then we might envisage a day in which home computer piracy is tackled head on, because if anyone doesn't enjoy losing money, then it's the record companies. With the Southwest Software Library currently under threat of extinction from a games company, this is just the kind of thing of which PD libraries should be aware. What do you think? Is it harmless computer entertainment, or blatant piracy? I think we should be told!

Andy Hutchinson

THROUGH THE BLACK HOLE

Another week, another re-release. Is this the software houses' *only* way of combatting the yearly software slump? Let's hope not.

Anyway, the latest game on offer is *Hunter's Moon*, previously released in 1987 by Thalamus. It seems that the test-pilot for the Hunter spacecraft got a tad carried away during a training exercise and was inadvertently warped into another galaxy through a black hole. The strange new universe (ooo-eee-ooo!) is inhabited by lots of whizzy things. They fly around and create a cellular background and weird star shaped patterns. At the centre of these patterns are 'starcells' which the hunter has to get at by blasting away at the cell patterns. Unfortunately, as quickly as you blast them away, the whizzy things, called workers, repair them. To add to this problem, the workers can eject spores which will, on contact, destroy the spacecraft.

To escape from this menacing void, the hunter must make his way through 128 different levels to arrive, ultimately, back home. The levels are spread across 16 star systems, and after each level the player enters a bonus phase (where extra lives and points can be gained).

The hunter's craft has several useful features up its sleeve; firstly, it has three different engines (retros, cruisers and thrusters) which can greatly assist the collection of starcells when used wisely. Next is the Permashield, which will protect the craft from spores (this lasts indefinitely or until the ship is destroyed – whichever happens soonest). Finally, the craft is equipped with a radar, showing the starcell locations in relation to the ship.

If a starcell is collected within a specified time period, a 'loopspace coordinate' is awarded. When four of these have been collected, the player is zoomed off to the next star system (regardless of whether the system has been completed or not). This means that experienced players needn't tackle every level of the game – clever,huh?

Also included is a Minteresque loopspace trainer – psychedelic! If you glance your eyes over my A-to-Z of games, you'll see that *Hunter* is in there, and quite deservedly so. The game is a smashing pot-pourri of game styles, and the three different engine types only serve to heighten the playability. At first the game is atrociously difficult, but gradually you learn to fight back!

Each of the 128 levels is totally different, and there is the usual share of puzzles and crafty twists. Graphics are simply splendid, with each level boasting an incredible amount of colour and imagination. The main craft, too, is intricately detailed and superbly animated. To round it all off, Matt Gray provides some stirring tunes (especially the 'High score' music), while Martin Walker's sound effects are simply out of this world.

Not everybody's cup of tea, but if you like a little intellectual stimulation to accompany your violent instincts, then give *Hunter's Moon* a whirl.

AN ARTISTIC IDEA

As one software house sinks into the fire, another rises out of the ashes.The latest on the scene is an Italian company called IDEA. One of their new products is an art package, going under the name of *Saracen Paint*.

Being a bit of a pixel painter myself, I am looking forward to it with bated breath (there have been no new art utilities to speak of for the 64 in years). It seems that *Saracen Paint* may be an expansion of a development tool used to develop some of IDEA's other software, such as the great platform game *Moonshadow*. I may be wrong, but if Moonfall's graphics are anything to go by, *Saracen Paint* should be well worth the wait.

A TO Z OF SOFTWARE

Right – the section you've all been waiting for. It's the essential A-TO-Z of C64 games! After an exhaustive brainstorm session, I've rustled together 26 of the best games of all time (13 this week, the other 13 next week). If you don't have *any* of these games, you'd better stick to spreadsheets. If you own 15 or more then you really know your marbles! Enough of the banter...

A – *Armalyte* (Thalamus) What else? My absolutely favourite game EVER! Superb graphics, perhaps the best ever seen on the 64, frantic gameplay, and some simply gorgeous music.

B – *Buggy Boy* (Elite) A brilliant conversion, capturing the style and feel of the arcade game. Weak sonics, admittedly, but the fast, chunky graphics and speedy gameplay make this totally addictive.

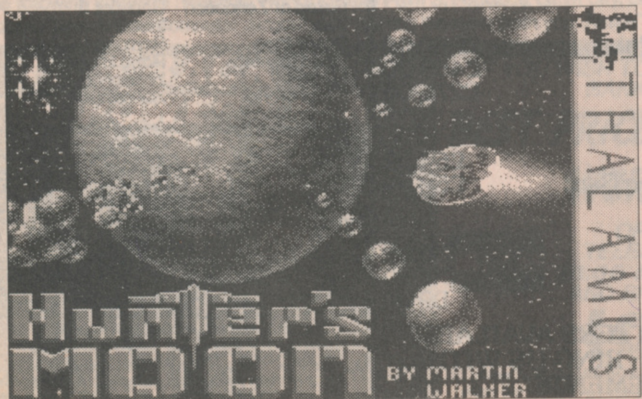
C – *Creatures* (Thalamus) Yes, it's only been out for six months, but it has quickly established itself as a classic game. Cute and original graphics, weird and wonderful tunes, plus some incredibly sick torture screens!

D – *Dropzone* (US Gold) Perhaps the first decent shoot-'em-up for the 64, and for its time was technically excellent. The game rolls along at an incredible pace, and is just totally compelling.

E – *Eidolon* (Lucasfilm) Probably the best game to emerge from the Lucasfilm stable, the fractal graphics create a wonderful atmosphere, as do the surreal creatures. Absorbing to play and watch, as well as being very tough.

F – *Frankie Goes To Hollywood* (Imagine) Surprisingly, the game-of-a-so-so-pop-group turned out to be a deeply fascinating arcade adventure; a vast array of puzzles and sub-plots draws you in. Graphics are varied, and the music is accurately converted.

G – *Gribbly's Day Out* (Hewson) A strange, nay, surreal game where Gribbly must rescue his lost children from the Mutant Blabgorian! Playability is taxing at times, but sound is jolly and cute (or jolly cute), and the graphics are beautifully designed.



• *Not just a classic rerelease,* **Hunter's Moon** *is also our choice for H in the C64 A to Z.*

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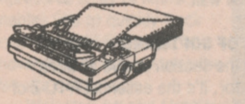

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HOW TO SUCCEED AT LAST NINJA AND DRILLER

OIf you took my (humble) advice last week and splashed out on *The Last Ninja* and *Driller*, then you might welcome this infinite lives listing for the former, and the infinite energy cheat for the latter...

```
10 REM *LAST NINJA – INFINITE LIVES – CASSETTE ONLY*
20 POKE649,0:FOR I=579 TO 640:READ A:POKE I,A:C=C+A:NEXT I
30 FOR I=31722 TO 31735:READ A:POKE I,A:C=C+A:NEXT I:IF C=8876 THEN SYS579
40 PRINT"ERROR IN DATA!"
50 DATA 198,157,78,41,3,169,0,162,1,168,32,186,255,32,189,255,32,213,255
60 DATA 120,136,140,21,3,169,128,141,237,2,238,119,244,238,120,244,169,166
70 DATA 141,20,3,108,20,3,162,121,142,178,3,206,179,3,76,81,3,169,197,141
80 DATA 135,120,76,191,3,12,0,0,169,49,141,159,2,169,234,141,160,2,96
```

Type in that listing, SAVE it for future use, then type RUN and follow the on-screen prompt.

For *Driller* fans everywhere, here is a cheat for infinite energy (an essential commodity). Simply head to the Obsidian sector and laser the southern end of the ground. Simple! Look out for more cheats and pokes right here each week.

H – *Hunter's Moon* (Thalamus) Perhaps Martin Walker's best game to date. The superbly detailed graphics and scintillating sound help to immerse the player in the already fascinating game. Presentation is good, but slightly dated.

I – *IK+* (System 3) The only genuine beat-'em-up in this A-to-Z, and probably the only decent one to speak of. A great backdrop, a plethora of imaginative moves, plus some great animation combine to make this the cream of combat games. And don't forget the superbly re-mixed music!

J – *Jack the Nipper II* (Gremlin) To be honest, this game was chosen merely because Jack is such a hilarious character! The game is difficult in places, but even so the graphics and sound make it loads of fun to play. One of the better arcade adventures around.

K – *Killed Until Dead* (US Gold) This novel approach to a detective game has any player in stitches. Accolade's fabulous graphics enhance the atmosphere, and the gameplay (similar to *Cluedo*) never ceases to amuse. Superbly funny.

L – *Last Ninja* (System 3) The first of the Ninja trilogy, and probably the best. A wealth of superb graphics, brilliant music, and a uniquely different style of gameplay make this a refreshing game to play. John Twiddy at his best, methinks.

M – *Mercenary* (Novagen) Would you believe, the *only* vector-graphic game on the C64? *Mercenary* has incredible depth, a googleplex of puzzles and objects, and all of it in fast 3-D. A timeless classic if ever I saw one, it still enthralls me to this day.

That's your lot, as I seem to have run out of space. Don't worry yourself, though, as we'll be bringing you the concluding part of this A to Z next week, as well as the usual batch of goodies. I may even be able to shed some light on what promises to be the licence of the year... *Terminator II– Judgement Day.* Until next time, Auf Weidersehen!

Andrew Roberts

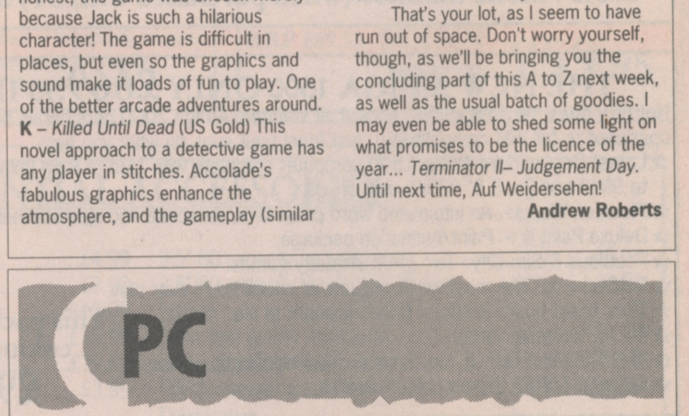
PC

BACK TO THE FUTURE III

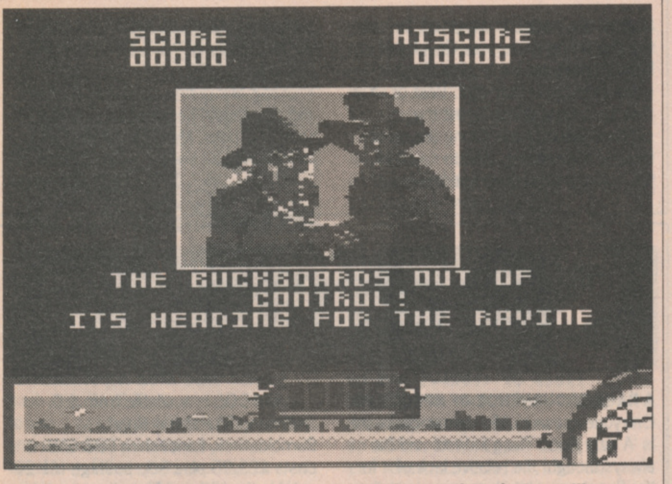
Back to the Future 2 was one of the worst full-price games I've played, so I was a bit worried about loading up the sequel... but I needn't have been!

While *BTTF2* consisted of some dire mono Speccy-port graphics and gameplay that would send you to sleep, the latest licence in the series is really rather jolly. But first, the plot...

Doc and Marty have just foiled the plans of the dastardly Biff, but when the DeLorean is hit by lightning, Doc is stranded in 1855, where he settles down to become a blacksmith. Marty discovers, however, that the Doc is going to be killed in just a few days' time (ie over a hundred years ago), so the two have to set out to thwart yet another temporal disaster... on second thoughts, it probably helps if you've seen the film...



• *The graphics are blocky, but your horse is really well animated.*



THE BUCKBOARDS OUT OF CONTROL!
ITS HEADING FOR THE RAVINE

• Eeeek! Doc must act fast to save Clara the schoolteacher in Back To the Future III.

The game is split into four levels, each corresponding to a scene from the film. In Level One you play the part of Doc as you leap astride a horse and go galloping off across the desert to rescue Clara, the schoolteacher, who is trapped on a runaway buckboard and heading for a precipice…

Basically, you have to keep going as long as possible without being knocked off by arrows, rocks, trunks and other hazards. There are both side-on sections and overhead-view ones for you to negotiate. Fall off more than three or four times and Clara plunges to her doom.

Level Two takes place in a shooting gallery. Here you manoeuvre your gun arm and some on-screen crosshairs as you try to shoot as many ducks and cardboard cutouts as possible.

Level Three is a pie-fight. You're lobbing these crusty comestibles at members of the villainous Buford gang as they appear in doorways and windows, shooting at you!

Level Four sees you running along the top of a train, collecting 'speed logs' to make the train go faster. The train is pushing along your stricken DeLorean as you have to get it up to a magic 88mph to escape 'back to the future'. Needless to say, there are plenty of obstacles and hazards in your way as you race along the train, including some more of Buford's men…

Back to the Future III is a decent licence. For a start, the graphics are all done in mode 0, so there's no horrible Speccy tat this time. Although the graphics are a bit blocky, they're colourful and quite nicely animated. The horse on Level One is especially well animated apart from the overhead sections it looks like a tap-dancing log.

There aren't many in-game sound effects to speak of, but there are plenty of decent tunes to help the action along. You can recognise a few of them if you put your mind to it, too.

BTTF3 is not really a classic licence, but it's a very good computer rendition of the film, capturing the atmosphere and the humour well. Funnily enough *BTTF2* got panned at the cinemas, too, while BTTF3 scored a hit. Life's full of coincidences.

MORE CARTRIDGES…

We're starting to see more console games appearing now, principally from Ocean. I was up at the company's Manchester offices just a few days ago, as a matter of fact, and managed to wangle a sneak preview of the arcade conversion of *Toki*, the game where you control a caveman turned into an ape by a witch. You have to rescue your girlfriend, and returned yourself to human form.

But you want to know what it looks like, don't you? Well, quite honestly, I was stunned. The backgrounds are extremely impressive. They're done in mode 0, so the resolution isn't terrific, but the programmers have used the extended palette superbly, toning the colours of the backgrounds in such a way that you're simply not conscious of the machine's limitations. They really do look excellent.

Most stunning of all, though, is the main sprite. Frankly, if you'd seen that sprite on an ST, let alone an Amstrad, you'd have been impressed. It's big, colourful, extremely well animated and very detailed indeed.

Toki's nowhere near finished yet, but when it is it's going to be the best-looking game on the Amstrad yet. It looks virtually the same as it does in the arcades! It really is that good.

While I was at Ocean I also picked up a copy of *Navy Seals* on cartridge, the very day it arrived back from the duplicators! I haven't had a chance to play it much yet, but from what I've seen so far it looks at least as good as *Robocop II* – and at least as tough! Look out for a full review soon…

STICK IT TO 'EM

Joysticks come and joysticks go, but every now and then a 'stick comes along that merits special attention.

Logic 3 was demonstrating just such a joystick at the recent European Computer Trade Show in London. It's called the Manta-ray, and it's the sister 'stick to the existing Sting-ray.

The Manta-ray is unusual in that the base has been designed specifically to be held in the hand. It even has a sculpted base for your fingers to curl around. There are three Fire buttons, one of which lies under your thumb, with the other two falling beneath the first two fingers of your hand. What this means is that you can find a comfortable holding and firing grip whatever size your mauler is.

There's more to it than that, though. The manufacturer has designed the Manta-ray with construction quality in mind as well as ergonomics. The Manta-ray may be extremely comfortable to hold and use, but it's also feels very solid. The stick itself is positive and smooth (and it does diagonals beautifully), while the Fire

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buttons are perfectly weighted. In fact, the one falling under your thumb is heavier, presumable to allow for the extra strength in that digit. Best of all is that the casing doesn't emit the slightest creak, even during the most frenetic alien-basing. And to cap it all, the colour scheme's great! Instead of boring old black and red, the Manta-ray, like the Sting-ray, comes in a fetching blue colour.

The Manta-ray costs from £12.99, and you should be able to get hold of it soon in Smiths, Menzies, Virgin Megastores and all the usual places.

Rod Lawton

Spectrum

A RARE OCCURRENCE OF SPECCY PD

Everyone knows public domain software is 'A Very Good Thing Indeed' and I've always thought the relative lack of it for the Spectrum a bit strange, especially considering Spectrum owners generosity and sense of community spirit. Well, hopefully the opening of a PD library for us poor undernourished Speccy types will change all that.

A kindly chap by the name of Gordon Inglis has had the thoroughly sound idea of setting up a library for Speccy adventures. His shelves are already well stocked with a batch of quite old but very worthy games that you can get hold of for only 99p (plus a 17p stamp) each. Titles on offer include John Wilson's well regarded *Behind Closed Doors* and other indie adventures like *The Crystal of Chantie* and *The Damned Forest.*

As with most Speccy PD libraries, donations are gratefully received so if you've written an adventure which remains lonely, unpublished and undiscovered share it with your fellow Spectrum compatriots and donate it to the greater good by letting Gordon Inglis have it at 11 West Mayfield, Edinburgh EH9 1TF.

This organisation is definitely worth supporting and if you want more details of exactly what's on offer send an SAE to the same place.

WHERE TO GET UNI-DOS

A few columns back, you'll no doubt recall (he says hopefully) my mention of UNI-DOS, a rather impressive sounding disk operating system on ROM for owners of Plus Ds and Disciples. The only slight catch was the lack of any address from which to actually obtain the thing. Thankfully Malcolm Perry, who gushed favourably about it, has sent me the required information.

UNI-DOS is available from S.D. Software, 70 Rainhall Road, Barnoldswick, Lancashire BB8 6AB. It costs £25.95 plus 50p postage (£1.20 outside the UK) and Malcolm says it is essential to state Plus D or Disciple, disk size and format (IE SS/DS, 49/80T, 5/3" etc.) when ordering. Got that everybody?

THREE INCH TREASURE TROVE

A few weeks back I asked you where I could get three inch discs for my Plus 3, hopefully without putting too much strain on my sad and decidedly unbulging wallet. At time of writing the nation has remained silent on this issue but I've found a cheap and reputable supplier all by myself.

Good old Zenobi Software, home of the Speccy adventure and much mentioned in this column because of the huge jiffy bag loads of games it keeps sending me, has some of the blighters on offer.

They'll do you 1-25 3 inch disks at £1.99 each, 25-100 of the things for £1.89 a go and bulk buyers of 100 or more will pay disk £1.85 for each disk. There's a postage and packaging fee of £1 to £3 depending on quantity but the prices still work out very reasonably indeed.

Zenobi Software is at 26 Spotland Tops, Cutgate, Rochdale, Lancashire OL12 7NX. I'll probably be buying some as soon as my, ahem, cash flow difficulties are resolved.

POKES GALORE

Yet again I'm going to expend a whole week's worth of fawning thanks this column to show my appreciation to Alan Jones of Renfrewshire. Obviously a true and loyal Spec-chum to the core he's just sent me a great big batch of pokes and tips.

TECH TIPS: TURBO CHARGE YOUR SPECTRUM

It's nice to receive tech tips and I welcome any with open arms, applause and lots of creeping thanks to the clever and wonderful human being who sends them in. So eternal thanks to the excellent Adam "The A500 is crap" Tomasso, a rabid Speccy fan from Inverness. The following two hints are his and very useful they are too:

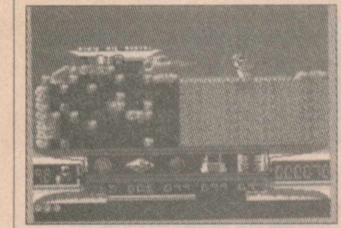
If you're fed up with the slow editing on the 128k spec simply switch the screen mode and watch the speed increase.

The RAM disk, as you well know, is an excellent place for storing files, screens etc. But you can also save individual variables on it. All you have to do is enter SAVE "M:", create the variables and bash in SAVE "Filename". Then reset the machine, (or type NEW, RUN, or CLEAR) select BASIC and load and print them to prove that they work.

Thanks again to Adam for those. He also asked me to print his address so that anyone having trouble with their Speccy can get in touch with him and get help courtesy of his large, ever growing, pulsating brain. He wants to hear from programmers to exchange wrinkles but doesn't really want huge listings to decipher.

Write to Adam at 4 Carrplace, Carrbridge, Inverness, Scotland PH23 3AF. An SAE would doubtlessly be appreciated.

If you have any similarly helpful tips of a techie or games playing nature send them to The Spectrum Column, *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW.



• *The secret of infinite lives and spookily high scores in* Turrican *will be yours if you dare to read this column.*

Here are his hacks for two acclaimed titles; *Pipemania* and *Turrican.* To get either poke working bash it in, SAVE if you think you'll want to use it again, type RUN, press ENTER and then start your tape from the beginning. Infinite lives and high scores will now be yours. Thanks again to Alan who wanted me to say hello to Jenni and his pals at school. So, er, hello.

```
10 REM BY ALAN JOHNS
20 REM PIPEMANIA
30 POKE 237339,0: POKE
23740,22
40 POKE 23659,0: LOAD
""SCREEN$
50 LOAD ""CODE : POKE 34011,0
60 LET 0=USR (PEEK
22526+256*PEEK 22527)

10 REM turrican
20 REM BY ALAN JOHNS (FOZ)
30 CLEAR 42495
40 LOAD ""CODE 42496
50 POKE 42520,111: POKE
42521,166
60 FOR F=42607 TO 42621
70 READ A: POKE F,A: NEXT F
80 RANDOMIZE USR 42496
90 DATA 175,50,246,110,50
100 DATA 13,123,62,195,50
110 DATA 166,11,195,0, 91
```

Robin Alway

Archimedes

MAKING AN IMPRESSION

Computer Concepts' *Impression* has reached version 2.10 and from what I've heard, this is likely to be the last official release for some while as the company wants to devote its time to something 'new'.

Among the features of version 2.10 are auto document saving, vertical rules and mail merging. The auto saving is configurable per document and it saves your document to disk automatically every so many minutes.This can be prompted if you want – presumably if you've just cut a large section and are about to paste it, you won't want to write an incomplete document back to the disk!

I wish this feature had been in version 2.05. About a month ago, I was going to finish the paragraph I was typing and then save it. What happened? The machine crashed. I was more than slightly cross, I might say.

The new vertical rules feature is a token gesture towards constructing tables, and although it's superficially good, it doesn't really allow you to do quite enough.

Three new types of 'tab stop' are available on a ruler; the first is a single vertical bar, which draws a vertical line at the given position. The width of this vertical bar can be set up in the STYLE dialogue box. The other two new tabs control the width and position of horizontal lines printed above or below a paragraph. Combining these new tabs enables you to create simple grids in your text.

Unfortunately, it is difficult to have more than one line of text on each line of the table. You would have to set up different styles for the top, middle and bottom lines of text. It is also next to impossible to have arbitrary rule offs that don't cover the whole table.

Perhaps table generation should be farmed off into a separate application that generates Draw files. After all, Computer Concepts took *eqn* from Unix and produced *Equasor*; so how about swiping *tbl* – a table generating program – as well!

Mail merging is achieved via use of the MERGE COMMAND menu option and careful use of two additional applications which, unfortunately, I haven't had the chance to see. *Impression 2.10* is available as an upgrade to existing registered users. For more information, contact Computer Concepts on 0442 63933.

SORRY TO BRAG, BUT...

I've just taken delivery of an Aleph One ARM3, and boy,does it make a difference!

The ARM3 is an advanced reduced instruction set chip (RISC) and is available for the Archimedes and A3000 series of computers. In practical terms fitting your Archie with one is the equivalent of putting a high speed turbo engine into your computer.

It really is quite a shock switching the thing off and wondering why everything takes so long! I use *Impression* on a 19 inch mono monitor and the speed of the font plotting now makes the system wonderful to use. I even took to digging out some old games to see how they run. *Zarch* is absolutely impossible to control, *Apocalypse* never becomes 'chewy' and as for *Conqueror*, well, I'd long since written it off as a hopeless case, but now it's really fun!

Fairly obviously, not everything behaves so dramatically. Games such as *Rotor*, *Blowpipe*, *Nevryon* and *Pipemania* already run at 50 frames a second, so they cannot go any faster. Apart from games, such simple tasks as opening a directory full of RISCOS applications takes a fraction of the time, the Acorn printer drivers load much quicker. *65Host* fairly bombs along at a very respectable rate (I've been playing *Electron Repton 2* all weekend).

Unfortunately, all is not sweetness and light. There are a number of problems caused by timing conflicts; programs don't expect the machine to go five times faster.

Watch out for PrinterDM which tends to drop out of graphics mode occasionally and print an '$' half way

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across the page. Early versions of The Serial Port's *Tracker* program behave oddly. RISCOS' own IIC module does strange things! It contains a delay that is controlled by hardware and software simultaneously.

This means that on an ARM3 machine the code runs faster and this could cause program execution problems. This problem may even arise when reading the clock or CMOS RAM although this is unlikely!

An ARM3 is certainly not an essential purchase, but I can guarantee that if you buy one you won't regret it. Aleph One ARM3's are available from Atomwide on 0689 838852.

PODULE PROBLEMS

Sorry to rub it in, but at the same time I plugged in my ARM3, I also installed a Laser Direct podule into my now-bulging 440. You can see bits of wire hanging out the back now!

This was an interesting experience as I already have two installed podules, an IIC plug for the Teletext adaptor and an Econet card. The latter means that I cannot have a real podule in slot 3 because the Econet card is too tall, but I didn't think this would be a problem as I would be able to use that slot for the IIC connection. This is just a big plug; there's no podule as such to foul on the Econet card.

However, owing to a wonderful piece of hardware design, there is a very large and very black capacitor on the podule backplane right next to the podule connector. This means that even if you didn't have an Econet card, you could only plug in podules that didn't extend sideways too much past the end of the connector.

In the end I had to use a soldering iron, but surely you shouldn't have to resort to such drastic measures! The problem remains that you can't have a podule in slot three when you have an Econet card fitted. If only the pins on the Econet card were a bit shorter, it would lie below the podule board.

My next dilemma will come when I run out of podule slots entirely. This should happen in a couple of weeks when I get a SCSI card...

FAX FACTS

Fax podules could become an essential fashion accessory over the next few months. Computer Concepts, whose Fax Card has been in development for almost two years now, has just about got it ready for market. It hasn't yet received BABT approval, though, and this could be a lengthy process. Irlam, is also readying a fax podule, though the early software for this is little more than rudimentary.

You can see what both companies are shooting for... a scanner,laser printer and fax card makes a nicely integrated system.

AND FINALLY...

Did you know that 'Multisync' is a actually a registered trademark of NEC? Is it going to become the 'Hoover' of the computer world?

Ken Coumarin

Macintosh

BIO-DEGRADABLE APPLE

Green Apple. Ho ho. In fact, two recent news items show that Apple is taking positive action to reduce pollution. A press release headed 'Apple moves quickly to eliminate CFCs from manufacturing' tells us that the company will eliminate its use of chlorofluorocarbons (bet the spelling checker doesn't know that one), which it presently uses in the cleaning process for circuit boards.

Of course, some would say that this isn't exactly a 'quick' move to eliminate CFCs – even McDonalds doesn't use them in the production of its packaging any more. But let's not quibble, at least the company is doing something positive.

Another news release says that Apple is offering employees a number of alternatives to driving to work. San Francisco is notorious for the amount of traffic-generated smog lying over the city. Apparently, the company is laying on free shuttle busses and a fleet of company bikes and is promising that employees who don't drive to work are guaranteed a lift home in case of domestic crises. Even better, every time an employee uses one of the new travel options they get reductions on goods from the company store.

WINDOWS 3 INCLUDED IN LAWSUIT

Apple has widened its look-and-feel copyright suit against Microsoft to include Windows 3. Previously, the suit only alleged that Windows 2.03 infringed Apple's copyright by resembling the Mac user interface too closely. But Apple has now said that it has added Windows 3 to the case. Microsoft, of course, says that it infringed none of Apple's copyrights. Apple isn't commenting in public.

WANNA PROGRAM THE MAC?

As we've said before, programming the Macintosh is not for the faint-hearted. Simple programs that should only be 50-or-so lines long suddenly expand to hundreds. They don't work – for no apparent reason (I've been wrestling with a theoretically trivial application for weeks). You have to read huge volumes of stuff before you can make a start.

But if this doesn't put you off, then you should know about APDA. This is the Apple Programmers' and Developers' Association, a subsidiary of Apple which exists to help Mac programmers. At the moment, APDA is doing a couple of special offers for people who want to start out in Mac programming. *Getting Started in Macintosh C* bundles *Think C* version 4,

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Apple's *Human Interface Guidelines* and Volumes 1 and 2 of the *Macintosh C Programming Primer* for $250. *Getting Started in Macintosh Pascal Programming* costs $275, and includes *Think Pascal* version 3, *Just Enough Pascal* – a training package from Symantec – Volume 1 of the *Macintosh Pascal Programming Primer* and the *Human Interface Guidelines.*

Of course, you'll have to add postage to both of the above prices. APDA is at 20525 Mariani Avenue, Mail Stop 33G, Cupertino, California 95014, USA. Phone 010 1 408 562 3910. The offers are good until August 1st.

If you're on CIX (another commercial), check out the 'softdev' topic of the 'mac' conference for programming-type conversations. Or, if you're a little more serious about programming, mail 'hoakley' and ask for access to the 'macdev' conference, where the big boys hang out.

PAGEMAKER UPDATE

Aldus has released a new version of *PageMaker* – 4.0.1. This adds some enhancements to the package – text import, for example, is up to 35 per cent faster. Other new features include the option to condense documents each time they are saved.

The new version also "resolves some anomalies found in version 4.0," according to the press release – PR speak for "fixes some bugs". It should be mailed free to all registered users of version 4.0 in the next two or three weeks in the form of an updater which you run on your existing version.

DESIGN RESOURCE

Any designers out there (why don't you subscribe to *MacPublishing*?) would do well to get hold of a new book called *MAC-graphics.* It's 288 pages of Macintosh-generated artwork including comprehensive process colour charts (including grey tints behind the colours, which is something you don't often see), effects produced in programs such as *Illustrator* and *FreeHand*, the effect of different line screens on printed output and so on. It costs £29.95, which is exceptional value for money, and is available from COMPUTERbooks London on 071-937 0516.

'BOUND TO BE BETTER

Not my crosshead, actually, but the one on a press release from Computers Unlimited, which announces that the price of the Outbound Laptop has dropped. For those who don't remember, the Outbound is the portable Mac clone which uses ROMs from a Plus or SE – which you have to supply. It's a neat machine, totally compatible with a real Mac, and actually approved (or, at least, not disapproved) of by Apple.

The new prices are still not exactly rock-bottom, but anyone considering a Mac Portable would do well to look at this machine first. The floppy-only version now costs £1,595, and the 40Mb hard drive machine costs £2,195. Remember, you have to supply ROMs from a Plus or SE.

Never fear if you don't own a Mac already; a new bundle has been announced which involves Outbound having bought hundreds of Mac Pluses, so that dealers can now offer an Outbound with ROMs already fitted. The floppy-only machine will set you back £1,895, the 40Mb hard drive version £2,495. So you're being charged £300 for a set of Mac Plus ROMs.

Computers Unlimited is on 081-200 8282 – they don't sell the machines themselves, but will tell you your nearest authorised dealer who will.

Ian Wrigley

POSTCARD FROM AMERICA

We usually think of computer thievery beginning and ending with the high prices that we're forced to pay at the corner silicon shop. That's just the closest incident to our bank accounts. Bandits have been busy foraging in the lower levels of the computer food chain.

Around the world, gun toting thieves have been carting away the goods. The robbers used to exclusively focus on memory chips, when DRAM was expensive. They're impossible to trace, in high demand, and are easy to carry during a getaway. One strong villain was able to carry $100,000 under one arm.

The usual getaway low-profile blend-into-the-crowd vehicle of choice was a late model Porsche 944. Who would look twice at a fancy car filled with two dozen laptops, a box of chips, and a couple of PCs. Unfortunately, the bottom fell out of the market a year ago, so they've had to find better glass.

Macintosh users have been lucky that the new target of choice has been Intel 386 chips, rather than the Motorola flavoured microprocessors. I'm positive we will see 4-Mb SIMM strips, the ones we want to pump up our System 7.0 juiced machines, on the preferred list soon.

WHEN I RULE THE WORLD: PART 2.

The second installment of a half dozen complaints I will remedy when I rule the world: Keyboard plug connections will be tucked safely out of the way.

The standard Macintosh Apple Desktop Bus keyboard is the prime offender. The design flaw is as obvious as the gills on a fish. The bus cable plugs stick out several fingers width over the edges of the keyboard. This puts them right in the way of your hand when you use the mouse, or place books on your desk. The small footprint keyboard that comes with the Apple IIGS is on the the right track. The ADB sockets are recessed, out of harm's way.

David Morgenstern

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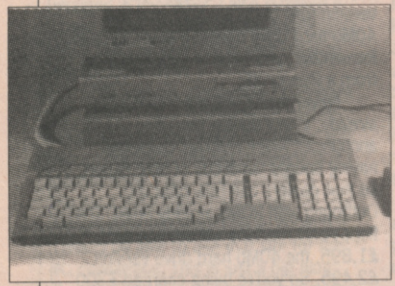
WHOLE WIRED WORLD

Wandering technophile Steve Gold reports on the furious microprocessor battle between Intel and the great pretender, AMD. Plus, the latest and greatest in high-tech gadgetry and software from around the world (but mostly from Japan)...

ST NETWORK: DEFINITELY WORTH THE WAIT



• Atari' ST: problem-free networking

After almost 18 months of development, A&D Software has finally unveiled the Universal Network for the Atari ST.

The $89.95 per node system is claimed to be compatible with all network devices – both for the ST and the PC– currently on the market.

According to the company, the Universal Network can multi-task between network nodes, while simultaneously carrying out foreground tasks.

Flipping through the system's specification sheets, I have to say I'm impressed. The software supports all the usual networking features users can find on Novell Netware, now considered to be the de facto standard on the PC, plus a host of ST-specific features such as rapid file copy and the like.

Any number of STs can be linked using the Universal Network, which will run on any Atari ST, though 1Mb of RAM is recommended for maximum usefulness and general useability.

Contact A&D Software at 280 Peach Street, Merlin, Oregan 97532 United States. Tel: 0101-503-476-0071.

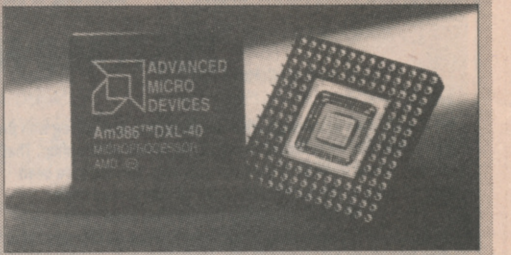
WATCH OUT FOR THE SUPER 386SX CHIPSET

Hot on the heels of Intel's much publicised 80486SX microprocessor launch comes news that Advanced Micro Devices has successfully cloned the 80386SX chipset.

Details of the new chip are sketchy, but sources close to the company say that it will cost about the same as the official Intel microprocessor, but will boast greater speed and overall processing power.

Several leading PC manufacturers have been working with AMD on the new chipset, and a clutch of new PCs using the microprocessor are expected to be announced very shortly.

Prototype shipments of the AMD 80386SX chipset have already been shipped out to PC manufacturers. As a result, the Sunnyvale, California-based company has received initial orders worth more than $10 million, suggesting that an awful lot of cloned 386SX-based PCs will be available over the coming months sporting extremely attractive technical specifications.



• Intel's 386SX chip: the old master's dominance is being threatened by AMD's fast and powerful clones.

According to informed sources, the AMD's top speed is 25MHz (equal to the Intel 486SX), rather than the 20MHz speed supported by the official Intel 80386SX microprocessor.

PHILIPS' NOTEBOOK FRENZY

Philips' production lines in the Far East are running at top speed to produce a new range of notebook PCs for export to Europe and the US.

The company's Taiwanese factory has ramped up its production of notebook PCs ready for a major launch later this year. Ambitious executives reckon sales are set to rise from an initial 50,000 units a year to 200,000 within three to four years.

LASER DAYS FOR THE ST

Many an ST owner has come to grief in attempts to make use of all the advantages of laser printing.

On a PC, this is no trouble since the word processor takes care of all the hard work. On the ST, it's a whole lot more tricky, as not every word processor is able to assume that you are driving a hefty laser printer.

Enter Software Development Systems (SOS).

The Californian company has launched *Deskjet Utilities Pak* (*sic*) for Atari's machine. For $34.50 users can set up the fonts, character sets and printer attribute configuration on HP Laserjet (and compatible) laser printers. Because the package was developed for the ST, it allows *Degas Elite*, *MacPaint* and *Gem* IMG files to be printed on the laser printer in all their glory.

Also, because the package can be loaded alongside existing Atari ST word processing software, it can be set to allow other software to reset the laser printer's configurations.

Despite its wide range of facilities, *Deskjet Utilities Pak* occupies just 9K of system RAM and can be set up to work with the ST's new extensible control panel. SDS is also bundling a bunch of shareware and freeware packages for the ST that neatly complement its wide ranging capabilities.

These include useful articles such as an ALT-HELP screen dump replacement, an ASCII text compressor and a picture format conversion package.

For more information contact Software Development Systems, 996 Redondo Avenue #404 Long Beach, California 90804, United States or telephone 0101-213-595-9799.

JAPANESE INCREDIBLE SHRINKING NOTEBOOKS

• On the move: Fujitsu gets smaller.

Fujitsu in Japan has unveiled a nifty, two pound notebook PC, the FMR Card PC, which sells for around the $4,000 mark.

Despite the fact that the machine breaks new ground in the notebook PC stakes, the Japanese giant says it expects several competing machines to be launched before the end of the year. The PC is just one inch thick and features a full-size keyboard and backlit LCD screen.

Fujitsu has dispensed with both hard and floppy drives, replacing them with Integrated Circuit (IC) card technology for mass storage.

This is an expensive solution, but Fujitsu says that it's the only way to keep the weight down. ■

NOW TOSHIBA IS READY TO TALK

Toshiba's computer operation looks like it's branching out into areas other than the portable PC market - the company's US subsidiary has announced Toshiba VP, a voice processing system designed for use with PCs.

The marvellous gadget is produced under license from VMX Incorporated, one of the leading companies in the field of voice processing in the US. According to Toshiba US, the deal allows the Japanese giant to offer the Toshiba Voice Processor on a world-wide basis (should it wish to do so).

The Toshiba Voice Processing system comes in three configurations - VP100. VP300S and VP300 - each supporting different requirements depending on your price barrier. The VP100 has eight ports and 11 hours of voice storage, while the VP300S supports mid-range users with a capacity of 16 users and an impressive 110 hours of voice storage.

For the extremely rich power user there's the flagship VP300 which supports up to 32 users and an enormous 350 hours of voice storage.

Exact pricing on the systems has still to be decided but all three systems are expected toi begin shipping in mid-June. Toshiba UK is expected to start making some announcements within a matter of weeks, but in the meantime call Toshiba America Information Systems on 0101-714-583-3700.

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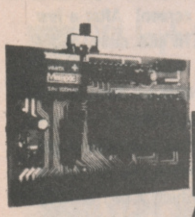

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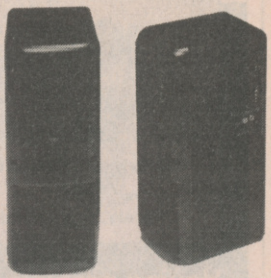

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TECH TIPS

Having problems moving your mouse? Is your PC not quite as portable as it should be? Need some tips on getting your machine to work? Write to Keith Pomfret, Tech Tips , New Computer Express, 30 Monmouth Street, Bath BA1 2BW.

TIP! Amiga driver

Issue 128, page 14 - Geoff Crowther needs an Amiga printer driver for his Deskjet Plus. One that works is available on *JAM* DISK 2 from *JAM*, 5 Greatfields Drive, Uxbridge, Middlesex UB8 3QN. Telephone:0895 74449.

The disk also contains drivers for Epsom JX-80, LQ.800, Oki 390 & 391, and Canon Bubblejets. It costs £2. They don't take credit cards. They are hoping to produce a further disk with more drivers.
Don Cox, MIddlesex.

And we'll heartilly endorse that. *JAM* (which stands for *Just Amiga Monthly*) is a fine source of serious Amiga stuff and is well worth a look to anyone that wants to do a little more than mutilate turtles.

TIP! Staying in tune

I have just read the Circuit City about connecting a tuner to a colour monitor. I would like to offer some advice to owners of the popular Philips 8833 and similar monitors.

You are probably aware that Philips sells a TV tuner for about £75 from Evesham MIcros. This expenditure is not necessary to use your monitor as a TV, all you need is a tuner which is most easily obtained from a video recorder.

I got a Beta video for nothing (transport was U/S but I only wanted the tuner), and connected the video to the 8833 using the video and audio out on the video to the monitor using normal phono connectors.

Hey Presto! A TV and colour monitor for next to nothing. You can switch the inputs on the front of the 8833 so you can have both connected at the same time. I hope this is some help to your readers.
George Mackenzie, Dundee.

It's amazing the lengths that some of us will go to to get a TV picture from a monitor. The only problem comes when the chaps from the TV licence stormtroopers come to kick in your doors with their highly polished jackboots.

I tried to get some sort of definition as to what is a TV for the purpose of buying a licence, but was unable to draw any conclusions. If anyone out there does know at what point peripherals start to become TVs, please let us know.

HELP! PC Upgrader

I want a simple to read, simple to understand book with no more than 200 pages in paperback form that will teach me how to upgrade my PC. I don't want to pay an arm and a leg for it.
Mo Axzam, Blackburn.

A book with the concise title, *How to modernise and repair PCs and compatibles* by RA Penfold which has 164 pages, is a paperback and costs £4.95 should do the trick.

VIOLINS! And sunsets

Enclosed is my solution to the "Help True Love" appeal in the edition dated 23 March 1991. The program is written for the Amiga and will work on 512K, but is better with one meg. There are simple instructions for the little installation required for the one meg version. I realise by now you may have had umpteen replies, but I hope that when forwarded this program will be found useful.

The user guide includes a small code sheet, not really to deter people from copying it, (I don't see a great market for it!) but to keep the data locked up from casual observance. I hope it all works, but should bugs be present, the manual informs the mystery recipient to contact me.
GD Elliot,Dundonald, Belfast.

That's the second working computer dating program that we've received as a result of the appeal by a chap wanting to throw away his card indices in favour of technology.

One of our resident Mac experts pointed out that a computer dating bureau would be an ideal candidate for multimedia with digital snapshots, audio, video and database all combining to give a fuller picture of the members. Now if they can just perfect the lifesize free-space hologram ...

HELP! Portable fantasy

The Brick was a lovely idea and I went green with envy at the thought. I went brown with panic shortly afterwards when I saw the price and consigned portable computers to the realms of fantasy. The more I think about it, though, the more I can't see any reason why a small box with a huge hard drive shouldn't sit outside the PC, and be transported between sites in much the same way as the Brick is. The techie bits are beyond me, but I'm sure that it can be done. (Or has been done.)
Lucas Bardsley, Pinner.

HELP! ST mouse attack

I have an Atari 520ST FM computer with a double sided disk drive and I still use that neolithic Atari mouse.

My problem is that I make heavy use of *First Word Plus* and *Timeworks* DTP, but when I booted up *First Word Plus* this afternoon, the mouse pointer wouldn't move on my SM 124 screen! After a few cold boots however, it did more and I could select things from the desktop menus, but I couldn't click on them, or my disk drive icons, or drag anything.

Also, when I boot up, I sometimes get a buzzing noise (like when you depress a key for no reason) which I can remedy using the space bar. Does this affect my desktop problem? Do I need a new mouse? Have I got a virus? I have tried all my disks, but the same thing happens.

A friend of mine (who wishes to remain anonymous) has just come back from South Arabia with his PC-XT and his software collection. This is all copied and bought in Saudi, as pirating is not illegal over there. As a result, it is nearly impossible to buy any original software. He doesn't want to be zapped by FAST, so advice please.
Adam Bullock, Whitby.

1) Get a good Virus checker from a PD library and use it. (0782 335650 will put you through to Goodman PD, ST specialists.)
2) Try another mouse. If this works, you need a new mouse. Don't get another

HELP! Arc v Amiga

I own an Amiga 500 with the 286 PC Emulator called ATOnce. In the future I hope to sell the Amiga and upgrade to Acorn's Archimedes (a 440 maybe). I am writing for advice on the subject of PC emulation on the Archimedes. Currently I am very pleased with the performance of ATOnce on the Amiga and would like to know if any such device is available for the Arc. A number of my friends own Acorn's own PC software emulator and as impressive as it may be it is only an emulation of an XT.

What I require is a hardware device such as ATOnce on the Amiga emulating the more powerful PCs (286 upwards). Is such a device available or being developed? If it is available or being developed I will proceed with my plans of upgrading to Acorn's 32-bit RISC technology.
Jean Smith, Birmingham.

The only PC emulator that we've seen is the software XT emulator from Acorn, but you already know about that. We haven't heard of any hardware emulators yet, but it can't be too long before someone thinks to downgrade an Archimedes to a 286 to allow it to run industry standard software.

• Why downgrade a good Arc to a nasty PC CGA display?

Atari one, get a Naksha one. They're much better and will help your productivity by their robustness and ergonomics

3) If it isn't the mouse, take the machine to your dealer/repairer to have it checked over.

4) Tell your anonymous friend that if he'd care to identify himself, we will get someone from FAST (Federation against software theft) or ELSPA (European Leisure Software Publishers Asssociation) to pop round and give him a bit of legal advice on importing stolen property.

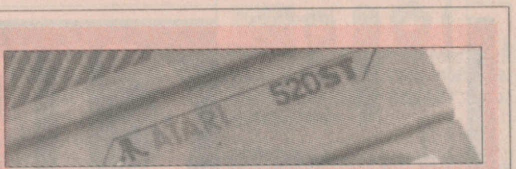
PRAISE! Good service

Another firm to add to your collection of those that go out of their way to please customers - Tectel, of Rayleigh, Essex.

I wanted a cable to link my Atari 1040STFM to an Amstrad CTM 644 colour monitor (bought in a Dixons clearance for £65), but with a socket to allow me to take off sound. One specialist firm told me it could not be done because of the complications caused by the Atari's 13-pin monitor socket.

Then I saw Tectel's advert in *Shopping Express*. Their response was a phone call for clarification and I ended up talking to the engineer about just what I had and what I wanted. In fact there was more than one phone call as they ensured I got just what I wanted - and they promised not to cash my cheque until I was satisfied with the cable.

I doubt if there was much profit in the amount they charged m, but they made sure of a customer who would not hesitate to recommend them. I now have the cable I wanted, fitted with a socket to which I have connected a pair of amplified speakers of the type sold to connect to personal stereos. So I have a colour monitor with (almost!) stereo sound for under £100 - same price as the mono monitor. A monitor switch box from Evesham Micros completes the set up.



• *Keeping the ST on its toes...you need a repair service you can trust.*

Incidentally, my thanks to Keith Pomfret for advice on transferring text files from my ST to the Macs at work and to his predecessor for the advice which led me to buy the ST in the first place. I'll pass on the argument about whether the Atari is better than the Amiga. I'm happy with what I get from the ST and as far as I am concerned that is all that matters!

Neil McAdam, Middle Barton.

Thanks for the advice about Tectel and thanks for staying with us. As for the who's machine is better than what, any machine that does what you want is better than one that doesn't (AMTDWYWIBTOTD) ...

TIP! Amigas/printers

I am writing in reply to Mr S Stinson's letter requesting details on Amigas.

I have a copy and if he wishes to send me his name and address, I shall be happy to send it to him.

While I am writing may I take this opportunity to tap your store of knowledge. I have on 'permanent loan' an Epson LQ-1050+ printer – unfortunately I have no manual for it. My problem is in doing graphic dumps from *DPaint III*. I want to be able to print in hi-res. For example when doing a line drawing the lines have a 'chunky' look especially on the diagonals. I have tried changing the density settings in preferences, and also changing the screen format in *DPaint III*, but to no avail. Have I missed something, or is this a limitation of the printer? Can this printer print in grey scale?

Thank you in anticipation for your help.

J Lyons, Holywood.

If Mr Stinson writes back in, I'll pass on the address to him. If someone has experience of similar problems with the LQ 1050+ or for that matter has a spare manual, get in touch.

TIP! Joybringer

Let me start congratulating you on the best section in *NCE*, well done.

Can I add something to your reply to Ade Walker of Newcastle regarding joysticks on the PC?

It is possible to connect your digital Amiga and ST, etc, joysticks to the PC and in fact in my opinion they are better (have you tried playing *Xenon 2* with an analogue stick? It's bloody impossible!) A company called Dynamics, the people responsible for the Competition Pro joystick, manufacture an I/O card for this purpose. It just plugs into any spare slot in the back of your PC and then you can attach any digital joystick you desire.

I bought mine direct from Dynamics but I have also seen the cards for sale in the Virgin Games Centre on Oxford Street and mail order from Special Reserve. It costs £25, a touch dearer than the analogue cards, but you don't have to then buy a special stick. Dynamics can be got hold of on 061 626 7222.

Another alternative I have seen, but this time not tried, is a joystick converter lead. Several companies advertise them. It costs around £20. All you do is plug one end into your analogue joystick port and attach your digital joystick in the other end. This way you have access to both sorts of joystick if you so wish.

While I've got laser to paper, can I ask a small favour? Please can you give that Tim Smith a big kick up the backside on my behalf? He owes me a copy of Atomix from last year.

David Rule, MIddlesex.

As I haven't got my hob-nailed socks on, I had to resort to the office baseball bat. I carefully drilled the end to a depth of 7 inches and poured molten lead in to give it a bit of momentum.

I then set off to thrash young Smith within an inch of his life but alas, when I reached his desk, the varmint had flown. Our copy typist had warned him when she read the letter as she typed it in. I've had to promise the publisher that I'll let him off so he can come back and get on with his supplements.

HELP! Portable ports

My Amstrad PPC may not be the state-of-the-art in portable computing, but nonetheless it serves my purposes well. It is the 640K version with a built in modem and I've had a backlight conversion done on it.

I want a hard disk but the applications that I use need both floppies. As there's a desk PC at the office (2x.25 floppies) I wondered if there's an external hard drive that could be shared between the two machines perhaps connecting to one of the ports. If there isn't, there should be but if there is, tell me what it is.

James Boll, Tyneside.

The beast that you want is the Megastor. This is a rather hunky grey box with all the necessary bits to connect its internal hard drive to the parallel port of your PC. The Megastor is available in sizes from around 20Mb to a huge half Gigabyte. It comes with configuration software to make your machine recognise that it's there and by using the parallel port, it is fast enough for every application that we threw at it.

Prices vary with the size of the internal hard drive and you can get more information from Megastor on 0753 44895. ■

TIP! Wider laserprints

I have noticed recently in the Amiga press an increase in the number of people complaining (justifiably) about the 10-inch restriction in the original Hp-LaserJet Preferences printer driver. There are currently two ways to remedy this problem.

1) Patch the Original Driver.

This involves changing the bytes at sector 10 offset 15E 80 D0 81 to read E7 80 90 81. This is easily achieved using a file editor such as *Newszap* on a copy of the HP-LaserJet file. This will give a 14-inch page length, although the driver imposes its own half inch margin at the top of the page. This finally allows full page A4 printouts from the likes of *Professional Page, Pagestream*, etc.

2) New Driver.

Get a copy of *JAM* disk 2 which contains new drivers for both the Laserjet and Deskjet printers written by a guy called Svante Gellerstam. As well as providing increased speed they use documents longer than 10-inches.

With this driver I found that printing from *Amiga Vision* or attempting to print a rescaled page from *Professional Page* will cause a guru. For this reason I keep both the patched driver and the updated driver in devs/printers and select the appropriate one for the job.

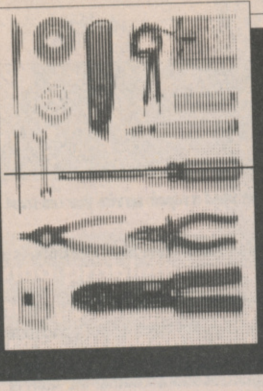
I hope this information is of use to laser printer users restricted by the original driver.

Ian Moran, Belfast.

That's the second recommendation that we've had for *JAM* this week. It must be worth buying. The page size restriction on a LaserJet can be a total pain and anything that solves the problem has to be a good thing. If you're taking the first option and hacking the code of the driver, first make a copy of the driver and hack into that. Then when you drop a clanger, you can start again with another copy of the original. If you hack the original and get it wrong, you're in trouble.

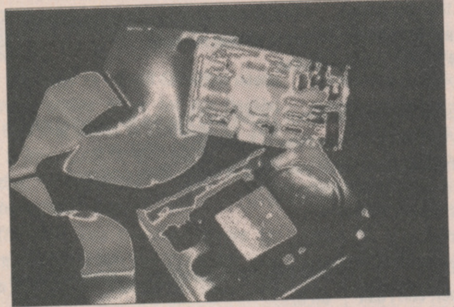
If you can't decide which way is for you, read method one again. If it makes sense immediately and you're already reaching for the sector editor, carry on. If you're scratching your head and wondering, opt for method two.

• *Getting the best out of HP compatible lasers on your Amiga.*



CIRCUIT CITY

A Brick or a Dynabook is a nice way to carry your work around with you but it costs an arm and a leg. Keith Pomfret looks at an alternative to portable mass storage – a take-away hard drive.



• A hard drive, controller and a couple of cables could set you on the way to portable power computing.

PROJECT INSTRUCTIONS

1) Take the hard drive power and signal lines from the PC power supply and the drive controller card and terminate them at suitable connectors on the PC case. Other PCs used will need to have a compatible drive controller card.
2) Take the hard drive, install it in a suitable box and terminate its power and control lines on the surface of the box.
3) Make up suitable leads for power and signal lines keeping them as short as possible.

If you regularly work in two or more locations, but don't need a laptop and can't afford one of the trendier computing on the move solutions, you could adapt your existing kit to offer an elegant solution.

In the *Express* office is an elderly, but serviceable, AT clone. When the hard drive went pop, rather than replace it with a similar model we decided to go for the modular approach and build up a hard drive as an add-on that could be attached to the AT externally. Part of the reason for this was so that the entire contents of the hard disk could be transported to other locations.

PUT TO GOOD USE

This would be a great help for anyone who needed to work in two or more places and wanted to carry large applications around.

The restricted use single machine licences in some software and copy protection in others can make it a difficult and expensive situation if you need to work in more than one place. This project to make the hard drive portable solves all of these problems by keeping the software in one place on the hard drive, but making the hard drive movable.

ON THE CARDS

In our PC, a controller card is connected directly to the hard disk to transmit and translate the data between computer and drive. If this sort of project is to work on more than one computer, it's a good idea to make sure that everything is compatible, ie, if you wish to modify a second or more PCs to run the hard disk externally, they'll have to use the same kind of controller card.

The second PC that we wanted to use the hard drive with was a mono 286 with a mono monitor that had been bought with the prospect of upgrading to a hard drive machine.

A phone call to Silica told us that a controller card similar to the one in our existing PC would cost £55. An added bonus was that this was a multi function card that could provide serial and parallel ports, a games port and control for hard and floppy disks.

This freed up a couple of valuable expansion slots in the PC too.

BOXING CLEVER

It's OK ripping the guts out of your valuable equipment, but anything taken out of a case should be put back into one. The portable hard disk drive needs to be built into a case so that it can be carried around in a briefcase between locations without coming to any harm.

Electronics and hobbyist suppliers such as Tandy and Maplin can supply these cases and a little ingenuity will mount the drive safely within. The power and control of the hard drive usually goes internally in the PC between controller and card.

In the portable version, it's necessary to break the link in two places. Firstly it must break at the PC's case. Secondly it must break at the box that you're mounting the hard drive in.

HOT WIRED

This allows you to have a tidy box, tidy computer and a suitable series of cables to connect them. It's quite possible to dispense with one of these connections by running the cables directly from either box mounted drive to PC case or PC drive card to box mounted drive.

This isn't such a good idea as the part most likely to get damaged is the cable. If it's a simple cable that plugs into two boxes it will be easier to replace.

The box with the drive mounted in will depend in size on the hard drive within. A 2-inch 20Mb drive will need a smaller box than a full size one gigabyte drive.

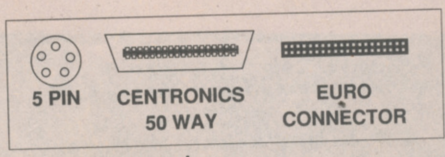
The connections will terminate at the box. The sort of connectors you use will depend on your own choice but those that can be screwed together (such as D connectors) or those that clip together (centronics type) will offer better integrity than say a simple edge connector.

POWER AND SIGNALS

There will be two connections. One for the power. The drive that we used had a 4-pin power connector with pins assigned to +12v, -12v, 5v and ground. These were terminated to a simple fastenable 5-pin DIN plug.

The drive control was a 40-pin euroconnector at the drive and the controller card. This sort of connector wasn't deemed to be robust enough for an external application so surface mounted Centronics style connectors were chosen.

An important thing to take into account at this point is the length of the cable between PC and portable hard drive. The shorter that it can comfortably be the better. It shouldn't be more than 24-inches long. This can be critical for the controller cable but less critical for the power cable. ■



• The connectors we used

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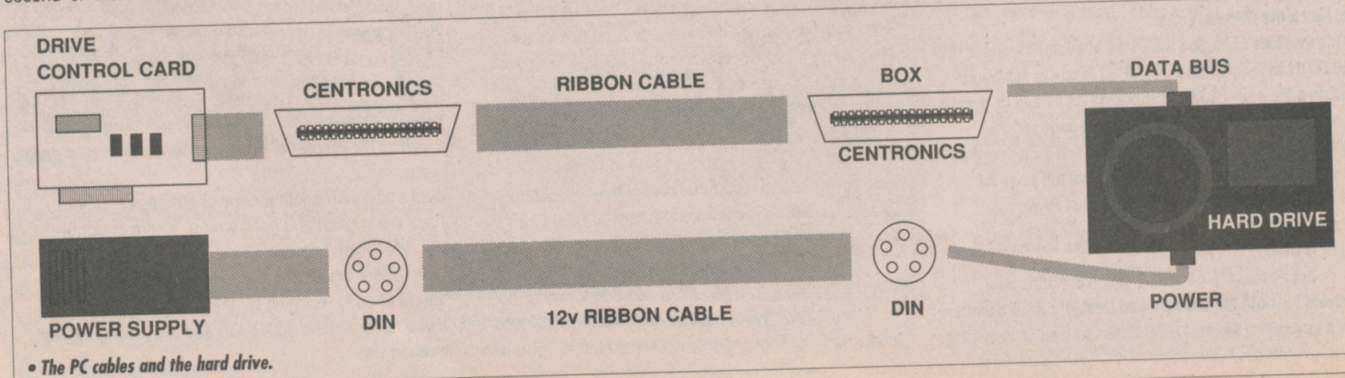

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GETTING IT RIGHT

Before you even begin to write a program, you must work out how to organise your project. Mary Branscombe takes you through step by step.

Whatever language you are programming in, whatever your program is intended to do, you have the problem of managing the project. If you are working on your own, it may seem more work to keep notes and indent your code, but you will be doing yourself a favour if you are consistent, if you write comments on your code fully and cleanly, with names for procedures and variables that tell you what they are for.

Deciding on a standard way of naming procedures or making a note of whether a parameter is for input or output can save you hours of effort when you want to reuse a section of code at a later date, but if you are working on a large project or in a group, even this may not be enough to prevent problems.

KEEPING TRACK OF THINGS

As soon as you start to develop a program, you get different versions of the software, some of which work and some of which don't. You need to know which is which and you need to have a note of how they are supposed to do it, which means documentation.

If there is more than one person working on the project, you have to know what everyone is working on and you need a set way of defining and documenting programs, simply to prevent duplication of effort. Even if there are only two people working together, you need a written specification of the problem you are solving and the program that you want to write to solve it.

> **"If you can structure your programming then you can dramatically improve your productivity."**

This may need to be more detailed than you think. If you divide the programming between two people, you need to specify the points where data or control passes from one part of the program to the other, so that the two halves of the program can talk to each other. If one person writes the routines to process the data and the other writes the code to talk to the user and store the information in the database, then both programmers have to know how information will be passed in and out of the data-processing routines before they start coding.

PROGRAM PROGRESSES

If the data-processing routines need to tell the user how they are getting along – it's always a good idea to give the user some indication of progress, so they know that the program is still working and hasn't crashed – then you will probably be able to use some of the code that was written to get information from the user in the first place. In the worst case, both programmers will end up duplicating each other's work under different names. You should look at the other person's code, at least to ensure that the program does not change style from friendly to terse half-way through, or vice versa.

The problems involved with specifying the program and making sure everyone knows what other people are working on get more difficult the more people that are working on a program and it makes sense to use the computer to help you. CASE – Computer Aided Software Engineering – is intended to do this. Using CASE means a slightly different attitude to programming. Writing the code is only part of the job and using a CASE tool can help you to spend enough time designing the program before you start on the code, and help you to stick to your design as you write the code. This should in turn reduce the number of bugs in the first version of the system. ■

MANAGING YOUR PROGRAMMING PROJECT STEP BY STEP

- Once you know what the program has to do, start to rough out a design for the program.
- Once you know how the program is supposed to work, describe what you want the system to do and list any information you have about problems in the existing system. This is the Requirements Model.
- The Data Model shows all the information that the program will work with.
- Your CASE tool will create an Entity Relationship Diagram which shows how one piece of information relates to another and the facts that make up the information in the data model.
- The Process Model shows how the system deals with this data, by breaking the problem down into smaller and smaller problems. The main task of any system is to produce a final answer. This can be broken down into getting the data, processing the data,outputting the result.

These different tasks are progressively broken down into smaller functions, until you have a tree of processes that cannot be broken down any further.

- Show how the processes and the data affect one another, ie, how procedures are chosen and what the procedures do with the data and so on. This is the Interaction Model.
- If you draw this out as a chart with types of data, entities, down one side and procedures down the other, it is called the Process-Entity Matrix. Where the line for a data type and a process meet, the chart shows what the procedure does to the data - whether it creates, reads, changes or deletes that data.
- To store data efficiently you need to design a database. Many CASE tools produce a Database Design from a Data Model.
- The design for the menus and commands that will control the program should be taken from the Process Model, with each process in the model being controlled by a command.
- The Process-Entity Matrix tells you what the procedures have to do to the data and you only need to add a description of the algorithm or method that you want to use to give a specification.
- If you want to define the screens that the user will see, some CASE tools will generate Screen layouts.

By this time, you have a specification for the program, the database is ready for use and you should have a shell for the menus and commands. All you have to do to write the program is add the code for the procedures and some of the more expensive CASE tools will generate much of this from libraries.

Using CASE means that you have to proceed in a logical order and you cannot jump between stages of developing a program in a haphazard way as the fancy takes you. If you can structure your programming in this way, then even the cheapest CASE tool, an £8 shareware program, can dramatically improve your productivity.

WHAT IS CASE?

CASE covers three areas: tools for writing programs, tools for managing a programming project and the underlying techniques and methods of programming.

Tools for analysing problems and designing programs are known as Upper CASE tools and those for writing and testing the programs are known as Lower CASE. Some tools provide support at particular points in the project, while others are used throughout the development of the program. You also need something to link these different tools together and the data dictionary or CASE repository does this, because it holds the information used by all the tools.

THE CASE DATA DICTIONARY

While you are working through the stages of CASE, you need to keep an eye on the way that you are representing and looking at data, especially if more than one programmer is using the same data. If you are not careful, you will end up with as many different representations for the main data that the program processes as there are programmers. To avoid this problem, you need a central dictionary of all the data used in the program; the names of procedures, constants and other variables, the numbers of arguments passed to each procedure and a brief description of what the procedure does and where it does it. This is known as the CASE repository or the data dictionary and a good data dictionary will link together all the models and diagrams that you use into a coherent whole.

Programming on your own or with fifty others? Using CASE tools or the back of an envelope? Talk to us about programming!

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THE PLACES TO BE . . .

Computer Shopper Show – 10-12 May

Love it or love it, you can't just fail to love it. Be there or be... (*that's enough - Ed*). Info: 081-868 4466.

PC Database Day 15 May

At the Ramada Inn, West London. Info: 071-385 1255.

All Formats Computer Fair – 18 May, 9 and 22 June

At the National Motorcycle Museum, Solihull on the 9 June, and at the New Horticultural Hall in London on the 18 May and the 22 June. Info: 0225 868 100.

CD ROM Europe 21-23 May

With Commodore's launch of its CDTV system, CD-ROM technology looks set to take off. Already there are more than 1.2 million CD-ROM drives in use. As people realise the advantages of high capacity, virus free information storage, this figure can only increase.

The conference is now in its third year and discussions will be held on issues such as the pros and cons of the various platforms available, the technology used, CD-ROM in real applications, educational objectives and the software required to produce products.

More information can be obtained on 071-733 60535.

Virtual Reality '91 – 5-6 June

Virtual Reality seems to be the happening thing at the moment. What, you may ask, is it all about? The aim of this two day seminar is to 'demystify' it, as Tony Feldman, the conference chairman, puts it, and to 'describe how it works, how it is being developed and to provide a clear, down-to earth assessment of its potential in commercial applications.'

• The UK's first virtual reality show is set to hit London.

Leading academics and industry spokespeople will be giving their views, hopefully explaining what is not of this Earth to those who are.

This emerging technology will have far reaching consequences. Education, research, computer graphics, the leisure industry: all of these stand to be dramatically changed.

The ideas behind Virtual Reality will be explained throughout the first day of the conference, with descriptions of the key issues involved, the underlying technology required, the effectiveness of human interfaces and the designing of a virtual reality generator.

The second day will be more concerned with the current and possible applications of Virtual Reality.

For more information, contact Alice Taylor on 071-931 9985.

OIS IMC '91 2-4 July

The document imaging show at the Wembley Conference Centre, London. For more information contact Kim Devan on 203 226 6967.

PC World Forum 9-14 July

For those involved in the PC world, hardware or software, and with a penchant for travel, the PC World Forum in Moscow is the place to be. Info: 010 1 508 820 8122.

16-bit Computer Show 12 July

At the Novotel Hotel, Hammersmith, London. Ticket hotline: 0726 680 20.

The Leeds Computer Extravaganza 13-15 September

At the New Exhibition Centre at Leeds University. Info: 0532 677 657.

Image Processing '91 29-31 October

At the Birmingham NEC. Info: 081-868 9933.

Computer Graphics '91 5-7 November

At the Alexandra Palace in London. Info: 081-868 9933.

Desktop Cad '91 5-7 November

Desktop Cad, the only show of its kind, will be held at the Alexandra Palace in London. Info: 081-868 9933.

Computers in the City12-14 November

At the Barbican Centre in London. Info: 081-868 4466.

GOLDEN MOMENTS

"Computers, that's the thing of the day." Or the day one year ago, when a 12-year -old Michigan boy was caught by the Computer Crime Task Force. He had managed to hack into the database of TRW, the credit rating company, and steal people's credit card numbers. These he posted on electronics bulletin boards for the use of all and sundry.

His mother was shocked by the news, believing her son to have been spending five hours a night, fourteen hours a day at weekends, happily amusing himself with today's technology. So much for computer literacy.

● TWO YEARS AGO, Micronet took a petition of 3,000 names to the Chancellor of the Exchequer in protest against the recently imposed VAT on bulletin board charges.

As it saw it, Micronet was being unfairly categorised with electronic news and business services such as Reuters. It preferred to think of itself as a member of the press, and as such exempt from VAT.

● MAY '89 also saw the release of the world's first talking vacuum cleaner. Hoover's Sensotronic Audio System 300 was capable of scintillating conversation about blocked tubes, filled bags and other such carpet cleanliness topics. Three years were spent developing this panacea for bored housewives.

WHERE ARE THEY NOW?

In the early days of the Spectrum, Ultimate Play The Game were the real business. Every game they created pushed the Spectrum to its limits. Then Steve Crow appeared, doing games that improved on Ultimate's themes. We tracked him down to see what he is up to these days...

Q: How did you first learn to program?

Steve: I was self taught, really. I did an O-level in computer studies at school, but didn't understand what the teacher was on about. I got myself an assembler from HiSoft and learnt through a process of trial and error.

Q: What about graphics and sound? Did you have any formal training?

I did art for a year in the sixth form, but once my first game was published I decided it was time to leave.

Q: Of the games you wrote, which was your favourite?

A: *Starquake* - I played and played it for two months. I think it was because I wrote it so quickly that I didn't have a chance to get sick of it.

Q: What about the competition? Which game do you admire most?

A: It has to be *Missile Command* - that's the one that got me hooked on computer games. I spent most of my youth putting money into that thing, and I never beat it. You could get as far as level 30 or 40 and it still got harder.

Q: Why did you stop writing games?

A: It got to the point where I couldn't do the whole game on my own. Hewson called me and asked me to do the graphics for Zynaps, and since I was getting sick of programming, it seemed like a good idea.

Q: So what are you doing now?

A: I'm working for Probe Software, on a game called *Overlord* for the Nintendo NES. It's a bit like *Supremacy*, but with lots of additions. After you've built up your population, finances, forces and gone to war, you get involved in an arcade-style battle sequence. Also, because the Nintendo has no mouse, there's an intelligent cursor routine which homes in on the icons to make it easier to select options.

Q: Is there any advice you would give to an aspiring games writer?

A: When I started you could buy something like a Spectrum and learn to program on that. Now it's mainly console work. You would have to start on an Amiga or ST to prove yourself, then sign with a company and move onto consoles. There'll soon be a shortage of console programmers because not many companies are training people. Most of the people I work with have been programming for five years or so.

It's easier with graphics. Draw something recognisable and send it to companies. If they like it they'll phone you to do presentation work. But don't ignore computers: graphic artists have to be able to communicate with the programmers.

GAMES:	PUBLISHER:	YEAR:
Factory Breakout	Poppysoft	84
Wizard's Lair	Bubble Bus	85
Starquake	Bubble Bus	85
Firelord	Hewson	86
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WALLY'S BOARD – Livingston back on-line. Speeds V21/V22/V22bis/V23. On-line. 24 hours, seven days a week. Parity 8-N-1. This is an ANSI BBS using Eazihost. All callers welcome. Tel 0506 440582.

USER GROUPS

BRIDGE CENTRE AMIGA CLUB – A club not just for Amiga users but anyone who wants to become familiar with the Amiga. All age groups welcome. Games, music and educational software. PD software £1. Membership £3 a year and an additional 20p every Friday. Come to our meetings at the Bridge Centre, Haddington, East Lothian, Scotland every Friday.

CLEVELAND AMIGA CLUB – Thought our Amiga scheme should get organised. Tel 06542 252133 and ask for Barry or write to 30 Aske Road Middlesborough, Cleveland, TS1 4DA. No lamerss. Hope to start PD club and fanzine.

OBSOLETE COMPUTER CLUB – Established 1990 to preserve and support Pre 1986 micros. Applications in writing to Mr S Walters, 42 Achilles Road, London NW6 1EA stating system details, date and history. All systems, minis and micros.

8-BIT BACK-UP – Spectrum, C64, Amstrad CPC, BBC, Sega and ZX81 user group. Newsletter. Costs 50p. Write to: 1 Northolme Close, Grays, Essex RM16 2NX. One order in 20 will receive a free gift so say what make your computer is. Discount to user groups.

FANZINES

CONSOLE MAGAZINE – The magazine for game consoles. Send large SAE for free sample copy to 125 Arnold Road, Bestwood, Nottingham NG5 5HR.

ATARI ST DISK MAG – Stellar Issue 1 out now. Free PD software, reviews and more. Send double sided blank disk, SAE and £1 to Mark Nobes, Newholme, Aston Road, Chipping Campden, Glos GL55 6HR.

JAM – Amiga fanzine for those who want to do more than just play games. £19.95 for a year's worth (12 issues) or a £2 for one issue as a taster. Tel 0895 74449 or write to 75 Greatfields Drive, Hillingdon, Uxbridge Middlesex UB8 3QN.

PUBLIC DOMAIN LIBRARIES

BIBLIOTECH PD – For the Amiga. PD to sell and swap. Send an SAE and 90p (payable to Nicholas A Kerr) for a catalogue on disk to 27 Chalk Hill, Bushey, Herts WD1 4BL.

SYSTEM PUBLIC DOMAIN – Archimedes. For 4 megs of the best graphics, RISCOS APS, utils, !Drawfiles, sprites, games, music and samples send five formatted disks, an SAE and £1 to Highover, Udimore, Rye, East Sussex TN31 6BG. Cheques/postal orders to Mr EJ Thomas.

GLOBAL PUBLIC DOMAIN – Amiga PD only 89p. For catalogue write to PO Box 2039, London E13 9PF. Every month free competition to win PD games and other accessories for your Amiga. We also swap PD.

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BINARY ZONE PD – For the best and latest CBM64 PD software write to Binary Zone PD, 153 Farriers Corner, Westlands, Droitwich, Worcs WR9 9EX. Greetings to fellow Xentrix and Computer World members from Kenz.

MG SOFTWARE – Atari Public Domain, only 65p or £1. Send an SAE for a catalogue to MG software, Cornerways, Beckingham Street, Tolleshunt Major, Essex CM9 8LL.

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RIVERVIEW PD SERVICEs – High quality PD and shareware for the Atari ST/STE. Prices start at just 90p per disk. For disk catalogue and free PD send 50p and an SAE to Riverview, 66 Abbey Road, Strood, Kent, ME2 3QB. We have nearly 300 disks available.

AMIGA STORM PD CENTRE – We do everything including mag (soon). If you are interested write to 4 Lipgate Place, Portishead, Bristol BS20 9QW. Tel 0272 845571. Don't be afraid to call. !00 per cent reply rate. We do disks, second hand games and give general advice.

LIGHTENING SOFTWARE PD CLUB – We can provide PD titles free of charge! Amiga only. For details send an SAE to Brian Roscoe, 14 Kingsmead Road, Moreton, Wirral L46 1QU.

PERSPECTIVE PD – Amiga Public Domain for just 85p including postage. Send for our free catalogue. Help and advice offered freely. Send £5 for eight introductory disks. Write to: Perspective PD, 6 Clover Close, Cumnor Hill, Oxford OX2 9JH.

PAS PD – For the ST. 75p catalogue disk (refundable). PD, blanks, joystick. Send now to PAS, 97 Holland Street, Ebbw Vale, Gwent. NP3 6HY.

FIRE PD – Amiga PD exchange. Send any good PD on disk for an exchange. Utilities and demos. 15 Deanes Close, Dovercourt, Essex CO12 4JH.

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Do you run a user group or bulletin board? Are you organising any event? Do you publishing a fanzine? Let the world know about it through *Shopping Express.* Fill in this form and send it to us at: 30 Monmouth Street, Bath BA1 2BW.

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SPOTLIGHT ON WACCI

WACCI is the only fanzine worth looking at for Amstrad CPC users. Now at least two hundred years old (or does it just seem that way), WACCI is a combination of an interesting monthly fanzine, the definitive CPC public domain library and a good bargain basement for interesting CPC knick knacks.

After a long cold winter during which WACCI towers went through delays caused by new technology, it is now back firing on all eight cylinders and WACCI boss Steve Williams promises a fact packed summer.

You can obtain more information from Herr Grüpenfuhrer Williams by telephoning 081-898 1090. (lovely answering machine, by the way).

If you'd like to take a calculated risk and you've a couple of sovs to spare, give WACCI a ring and organise a trial copy. It will be worth your while.

SECOND-HAND PRICE GUIDE

Just a few points to bear in mind:

- **The following chart is compiled from the reader advertisements we have received for Shopping Express over the last month, and the items listed are those which have been advertised in sufficient quantities to calculate the averages.**
- **The lower priced products usually need repair work of some sort.**
- **The higher priced items are invariably offered as part of a package with numerous add-ons and mountains of software. This is why the higher figures quoted under 'range' can often be higher than the machine will cost brand new.**
- **Remember, this is only a rough guide, so if you find a PC down your local market for £20, bully for you.**

	Range	Av	Trend
Spectrum	£30-100	£65	▼
Spectrum 128	£120-250	£175	◆
Spectrum Plus 2	£90-300	£165	▲
Spectrum Plus 3	£85-180	£150	▼
QL	£30-90	£70	◆
*C64	£75-355	£150	▼▼
CPC464	£70-350	£205	▼
CPC6128	£170-500	£300	▼
PCW 8256	£175-330	£250	◆
PCW 8512	£250-450	£375	◆
PCW 9512	£325-550	£430	◆
*520STFM	£200-650	£300	▲
1040STE	£190-380	£300	◆
520STE	£250-450	£310	◆
800XL	£30-225	£125	▲
Lynx	£100-115	£110	▼
Portfolio	£130-185	£150	▲
*A500	£220-700	£390	▼
A500 (1Mb)	£250-800	£440	▲
PC Engine	£90-250	£190	▼
Sega Master	£50-275	£140	▼
Sega Megadrive	£80-350	£190	▼
Gameboy	£50-100	£85	▼
Game Gear	£100-150	£120	▼
Neo Geo	£300-400	£350	NEW
BBC B	£175-380	£250	▲

* – advertised most frequently
▲ – more expensive than last month
▲▲ – over £50 more than last month
▼ – less expensive than last month
▼▼ – over £50 less than last month
◆ – no movement
New – now selling in significant amounts

Not much movement on the second hand price front this month, though it's a weird and wacky world where you can buy a second hand Neo Geo for less than an old Amiga. Amstrad PCWs were strangley few and far between this month but Ataris of all sorts are still shifting in huge numbers.

SHOPPING EXPRESS BUYERS' GUIDE

While *Shopping Express* is undoubtedly the perfect way to track down the best bargains in the computer world, many people are still, perhaps understandably, wary of buying products via mail order or through personal ads. This is probably because usually you are not able to have a look at what you are purchasing before you hand over your money.

We do everything in our power at this end to make sure that all the advertisements we run are above board. But here are a few tips designed to help take the risk out of buying via mail order or over the telephone.

- Be precise in describing what you want to buy. Leave no room for error. Feel free to go overboard in double checking details - make, model, specifications, colour, size, the page number and name of the magazine in which you saw the advertisement etc.
- Confirm the exact price of the article you are buying. If you are phoning a company check if there are any hidden extras, such as postage and packaging.
- Check how the item will be delivered to you and how long it should take. This is especially important with reader ads where delivery details are rarely mentioned.
- If you are writing off for the product keep copies of all letters. If you are phoning, note down details of when you phoned and who you spoke to.
- If possible enquire about guarantees and servicing. Check the supplier's policy on returns and refunds. With reader ads, it is best to make the effort to see the item personally before you hand over money.
- When dealing with companies it is best to to pay by credit card, especially for items over £100, as this provides extra cover under the credit card companies' own insurance schemes. Otherwise use a crossed cheque or postal order. Avoid sending cash at all costs.

THE PD COLUMN

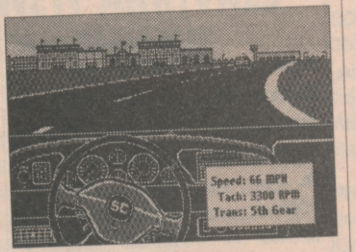
Feel like building up a huge software collection without whacking out silly amounts of cash? Frank O'Conner continues the search for software on the cheap. This week: Fast cars, The Simpsons, DTP shenanigans, and much more....

If driving is your thing then check out the latest 'on the road' affair from the Amiga and PC PD Club. It's a really neat driving *cum* information package called *Ford Simulator 2* which comes as two distinct sections.

The first is a corporate/technical catalogue of Ford Motor Company and its products. The catalogue contains some exceptional diagrams of Ford cars (mainly American) which include detailed cross sections of engine, wiring, fuel systems and other such techie lovelies.

The second part of the package, and easily the most fun, is a racing game, except that it's not. What we are presented with is a simple, straight-forward motoring game – there are no, repeat, no competitors.

Sure, there are other cars on the track, but they tend to be harmless commuters, probably coming home from the office. Don't worry about these (but don't crash into them), it's your own car handling skills which will be put to the test.



• Forward Ford: negotiate three courses.

You can zip along at highish speeds of about 100mph, but bear in mind that Formula Fords can't manage the amphetamine speeds of Formula One

The graphics are standard CGA drabness, but they do move with astonishing speed and smoothness. You get the standard first person view point, as seen in games like *Hard Drivin'* and *Test Drive*. The sound is an irritating warble, which is apparently representative of a 16 valve engine.

The best thing about this particular game, is the wide range of options available (that and the fact that it costs absolutely nothing at all).

You can choose from several driving scenarios, including city streets, country roads and a drag strip. Most play in much the same way but with the different background adding a welcome degree of good old fashioned variety. Lots of fun after a hard day at the office.

CRASH AND BURN

Those lucky fellows at New Wave Software in Manchester have received a lovely demo for the Amiga featuring all the thrills of...a car crash.

Animation is gorgeous and slick, while the lighting is as impressive as anything I've seen on Public Domain

Called the Unicycle Demo, it requires 1Mb to run, but it's worth it. The demo features some of the nicest animation you'll ever see, as well as a ferociously vicious plot to boot.

A cute little riderless unicycle makes his way across the harsh Arizona desert. In the distance, a bright red Lotus Esprit heads down a highway at a horrible speed. Their paths meet in the middle of the road and, well you guessed it...kerblamm! The poor little unicycle is thrown to its doom.

The animation is gorgeous and slick, and the lighting as the unicycle wheels around is as impressive as anything I've seen on Public Domain. Cinematic panning shots illustrate the action, and the overall effect is absolutely sweet. The sequence, which lasts little more than a few seconds, is accompanied by a hauntingly excellent atmospheric guitar riff.

It's not very practical, but the obvious effort that has gone into this demo is apparent and it makes a nice display of your Amiga's power.

Unicycle is wonderfully crafted, designed with skill and is definitely one for all you Amiga demo fiends.

Borders Computer Centre
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★ COMPUTERS ★ SOFTWARE ★ PRINTERS ★ SUPPLIES ★

SYSTEM PRICES (EXCL VAT)

Goldstar IBM PC Compatible Systems

MODEL	INTEL PROCESSOR	SPEED	MEMORY	FLOPPY DISK	HARD DISK	DISPLAY	MONO 640X480	COLOUR 640X480	COLOUR 800X600
GT212	286	12MHz	1Mb	3½" or 5¼"	40Mb	S-VGA	699	799	899
GS317	386sx	16MHz	2Mb	3½" or 5¼"	40Mb	S-VGA	999	1099	1199
GS318	386sx	20MHz	2Mb	3½" or 5¼"	40Mb	S-VGA	1099	1199	1299
GS320	386dx	20MHz	2Mb	3½" or 5¼"	40Mb	S-VGA	1199	1299	1399
GS347	386dx	25MHz	4Mb	3½" or 5¼"	40Mb	S-VGA	1699	1799	1899

Goldstar Technology are a multi-billion pound company, employing over 3,300 staff. For over 30 years they have manufactured and labelled systems for the world's leading computer companies. GoldStar are now marketing their own range of **high quality**, low cost PC systems. All systems include as standard:
24ms 40MB hard disk with IDE controller
Choice of 3½" and/or 5¼" high density drives
MS-DOS 4.01 and utilities
Paradise Video Super VGA adaptor installed on motherboard
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"Stylish in design"
"Could easily fit into information technology intensive environments"
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"It is so dependable and adaptable" "It has taken everything in its stride"
From review of GoldStar GS347 - New Computer Express 13 April 1991

Please note that the above system configurations are intended as examples and alternative configurations are available on request. All systems are fully tested and set up for our customers immediate use. The above prices exclude VAT but include Securicor delivery.

MAIL ORDER SPECIAL

Commodore Amiga 1MB Screen Gems Pack	£379
Atari 1040 STE Family Curriculum Pack	£379
Atari 520 STE Turbo Pack	£329

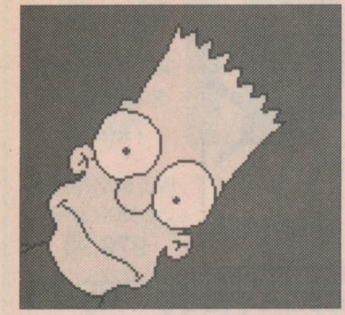
The above prices include VAT and Securicor delivery

Plus your choice of one free game from the following: Gods, PGA Tour Golf, Super Monaco Grand Prix, Turrican 2, SWIV.

We are situated within yards of the main A7 road (between Carlisle and Edinburgh) and are delighted to welcome personal callers. Please telephone to ensure that local holidays etc. do not apply. All major credit cards accepted. Cheques should be made payable to Borders Computer Centre. Please allow a short period for cheques to clear.

1 Bridge Street, GALASHIELS, Selkirkshire, TD1 1SW

IT'S HIM AGAIN



A very large number of Simpsons demos have cropped up in recent months, but none have really done justice to the yellow headed brat. Until now that is!

A really spiffy Simpsons demo arrived from world famous PD company NBS in the picturesque Isle of Wight.

The demo features a sampled and remixed version of *Do the Bartman.* While all of this musical hilarity is taking place, we are treated to some really well drawn and animated piccies of Matt Groening's now infamous character.

Springfield's most infamous brat is seen getting up to all manner of mischief, accompanied by various family members and the beleagured residents of Springfield.

The animations really capture the feel of the actual Simpsons cartoon, and this is another demo with which you can impress your shorts eating friends.

PD FLIRTS WITH PROFESSIONAL DTP

A little bit of news came floating this way concerning a big movement on the PC PD front.

A reliable source revealed that Folio Shareware was involved in serious discussions with huge software house GST, concerning one of the latter's most famous products.

Timeworks Desk Top Publishing had apparently been put forward as a possible PD release. GST, it would seem, wanted to concentrate all its efforts on a new program, *Deskpress.*

While putting all of its time into the new product, the firm had considered releasing a non-printing version of *Timeworks DTP* either as shareware, or as Public Domain.

A non-printing version would have meant that it was of little practical use, but would at least have allowed for training and experience at a minimum of cost, leaving you to make a sensible buying decision later on.

Sadly however, the whole deal fell through because of a licensing disagreement. Still, it bodes that such discussions are taking place.

BLACK AND WHITE ART FOR THE ATARI ST

A decent mono paint package came in from PD company Caledonia PDL. Shame all you colour users can't get hold of it, huh? Well...maybe not. Also included on the disk is a rather useful mono emulation package.

The mono emulator basically fools the computer into thinking it is outputting to a mono screen. The main problem with using this on a colour monitor, or more especially a colour TV, is the screen update. The emulator, which is quite an old program, tidies things up a bit. It gives you a choice of running speeds on startup, and the basic rule is, the higher the speed, the lower the screen quality.

Load up the art package, using the mono display and away you go. The most colourful, psychedelic, brightest erm...black and white pictures can be created at will.

The untitled mono art package is very flexible, with the usual range of fills, circles, ellipses. It does have a slight niggling problem, in that the pull down menus have to be clicked off, and will stay on screen until you do so.

These menus sit happily underneath each other and mess up the screen. But it's worth pointing out that having more than five or six menus cause the program to crash.

This problem can easily be avoided though, just as long as you remember to click each menu off when you finish, but you won't remember so you'll just have to find out for yourself. ■

WHERE TO GO

Both Amiga and PC owners will probably do well to get in touch with the Amiga and PC PD Club.

Send a SAE to:

Amiga and PC PD Club, 48 King William Drive, Cheltenham, Glos., GL53 7RP, or Prestel MBX: 011115474

Gnarly New Wave Software supply some excellent Amiga PD, and can be contacted at:

New Wave Software, P.O. Box 199, Manchester M1 1JE.

Even more Amiga laffs can be gotten from N.B.S. at:

132 Gunville Road, Newport, Isle of Wight, PC30 5LH, or telephone: 0983 529594

Atari ST owners might be interested to know that Caledonia PDL supplies a wide and varied range of dang near free PD and can be contacted at:

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326: POWERPACKER by Nico Francois. Excellent crunch util. £1.50
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700: D-COPY V1. Excellent copier program. Full instructions £2.50
724: 6 GOOD DEMOS + A GAME. The Questor Cowboy anim is good £1.50
728: UTILS. The famous Boot-Shop, Boot-Kit + others £2.50
741: NorthC V1.3 (2 disks), C Assembler etc. by Steve Hawtin. £5.00
756: PSUEDO-COP GAME. An addictive, but not easy, game. £2.00
762: THE BEGINNING. A well presented demo + others. 1 Meg £2.00
967: STEREO 3d demos by Exit. (Great! but needs 3d glasses). £2.00
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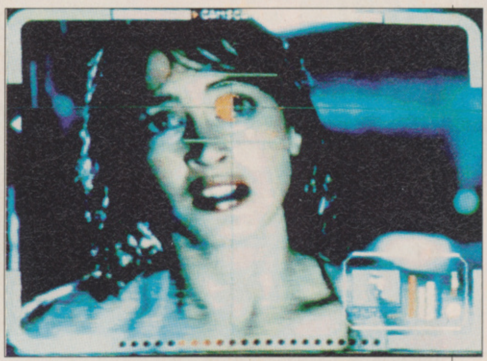
VIDEO FUSION

The Amiga has made Desktop Video Production (DVP) cheap and accessible for video enthusiasts. Dave Golder assesses two entry level devices which blend video images with Amiga graphics.



• This picture is a composite image created using a genlock. It combines a video image (the girl) with Amiga graphics.

Long gone are the days when amateur film makers had to use Letraset on a bit of black card to produce title sequences and captions. Video cameras have opened up whole new areas of electronic trickery and when it comes to mixing computer graphics and video images, the Amiga is in a class of its own, offering high quality results at a price enthusiasts can afford.

The reason for this is a very simple, but unusual feature of the Amiga which is often overlooked: it was designed with an external synch pulse so that its processors could easily match the timing of industry standard NTSC and PAL video signals. In other words, the video output from the Amiga can be synchronised with the scanning rate of any video source. So while video production devices do exist for other computers, the Amiga boasts the widest and cheapest range of powerful video peripherals.

Genlocks are the devices which synchronise video and Amiga displays and allow you to superimpose computer graphics on a video picture. The background colour of the Amiga display (ie blue for the workbench or black for the work area of *Deluxe Paint*) is electronically removed so that only foreground graphics remain in view. This composite image can then be recorded on videotape. Top range genlocks which produce broadcast quality images, such as the Triangle's T800 cost well over £1,000. But you can pick up low end models for just over £100. Two new entry level genlocks on the market are the Pal Genlock from HB marketing and RocGen RG300C from Roctec Electronics Ltd.

PAL GENLOCK

The first thing to strike you on opening the packaging is how skimpy the manual is; just four pages about the size of a floppy disk with some very large lettering and a basic diagram. It is not all helpful, especially if you have never used a genlock or other Amiga graphics device before – you could end up not even knowing where to stick your leads.

And there are an awful lot of leads. The genlock plugs into the Amiga via the video socket and is also connected to the video recorder or camera supplying the input image and the video recorder which will receive the composite picture (though this image can also be put through to the Amiga monitor).

This genlock uses the old style BNC connections (the chunky metallic ones which have to be pressed firmly into place and twisted to lock into position, rather like a child lock) for the leads running to and from the video sources. Few modern video recorders have these, so you will probably need to buy some adaptors.

> **"The Amiga boasts the widest and cheapest range of powerful video peripherals."**

The quality of the video image received is very good, but the definition of graphics is a bit fuzzy. They also tend to jump about whenever the video image is very dark or completely blank and are especially bad when you freeze the video image.

The bundle comes supplied with *Home Titler*, an effective, if limited, piece of titling software. It allows you to write titles and captions then scroll them either horizontally or vertically. You have a choice of just four colours, but you can add shadows. It is simplistic, but it does at least get you started without you having to buy extra software.

At £130 the Pal Genlock is fairly cheap and aimed squarely at the low end user. It does its job satisfactorily, but would not appeal to perfectionists who want something with a more professional finish.

THE ROCGEN RG300C

The RocGen requires just as many wires as the Pal Genlock, but at least the manual is clear and easy to follow. It also has standard phono connections for linking up with the videos which are much more common.

The image received from the video source is near perfect and the graphics are much steadier and better defined than with the Pal Genlock, though still some way short of broadcast quality. The only time the graphics do break up badly is when they are overlaid on a strobing image.

The major bonus with the RocGen is that it has fade and dissolve facilities built in. This allows graphics to be faded in and out or made to look transparent. The video image can also be made to dissolve away to leave just the graphics. This helps to make designing title sequences a lot easier as the dissolves and fades do not have to be programmed into a graphics routine, but can be done manually.

But the software provided with RocGen is extremely limited and very slow and clumsy to use. Basically you can write captions on screen in a number of fonts then change their colour, and that's about it. You cannot even scroll. It might be a good idea to buy an art package or specialist titling package as well.

Overall, the RocGen offers facilities which allow for much more slick and professional-looking presentations than the Pal Genlock while, amazingly, costing over £20 less. At just £101, the RocGen is the ideal entry level device for anyone interested in Desktop Video.

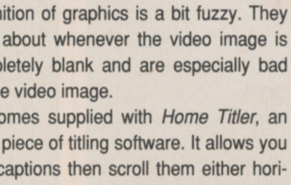
The Pal Genlock is available from HB technologies on 0753 686000. The RocGen is manufactured by Roctec Electronics Limited and distributed by Silica Systems on 081-309 1111. ■

CREATING GRAPHICS

Genlocks do not actually generate the graphics although many genlock packages do come supplied with video titling software. This usually allows you to write on screen using Amiga resident fonts, then lets you scroll them either horizontally or vertically. Indeed, the two pieces of software bundled with the devices on review do little more than this.

There are more specialised video titling packages which offer a variety of fonts along with animation effects, captioning and transition facilities such as fades and wipes. These include *Aegis Videotitler* from HB (0753 686000), *Video Studio* from ZVP (081-520 9753), *TV Show* from Brown-Wagh and *Broadcast Titler 2* from Amiga Centre (031 557 4242).

You can also use any Amiga art package to generate graphics. *Deluxe Paint III* from Electronic Arts (0753 49442) is especially good because it can produce animation effects quickly and simply. But you will need at least half a meg of fast RAM for the facilities to work.



• You can create impressive graphics with any Amiga art package, such as **Deluxe Paint III.**

WHICH ONE'S THE BEST?

PAL GENLOCK – £130
▲ Fairly cheap
▲ Supplied with good titling software.

▼ Composite picture quality a bit shakey.
▼ Appalling, unhelpful manual.
▼ Uses old style plugs.

ROCGEN – £100
▲ Extremely cheap
▲ Steady composite image.
▲ Fade facilities built in.
▲ Easy to install.

▼ Lead to video port far too short.
▼ Supplied titling software very poor.

Games Week

If it's the latest reviews, the hottest news and the most essential tips you're after then Gary Penn is the man with all the answers.

BUBBLING UNDER

It pays to shop around these days. Why, for around £10 you can now pick up one of many quality re-releases of old favourites for the Amiga, Atari ST, and even the IBM PC and compatibles.

Mirrosoft's range of Mirror Image titles is about to expand with Cinemaware's chucklesome tribute to the Three Stooges, the Bitmap Brothers' ballsy blaster *Xenon 2: Megablast*, PSS' strategy- simulation Waterloo, and Imageworks' conversions of Sega's coin-op tennis simulation *Passing Shot*.

It's also worth keeping 'em peeled for the first batch of Mirror Image releases, which included the Bitmap Brothers' ruff 'n' tuff future basketball simulation *Speedball*, Realtime's classic *Carrier Command*, Firebird's *3D Pool* (endorsed by Maltese Joe), and Cinemaware's Rocketeer-inspired *Rocket Ranger* and its mediaeval action-strategy romp *Defender Of The Crown*.

In a more traditional textual vein, Mastertronic has been re-releasing Infocom's classic text-based adventures since the end of last year. The fantasy land of *Zork III* is now following in the footsteps of *The Leather Goddesses of Phobos, The Hitchhikers Guide To The Galaxy* and, of course, *Zork I* and *II*. The final three releases in the series of 10 are the magical *Enchanter* and *Sorcerer* and the mystery thriller *Deadline*, all due before July priced at £10.31.

On Electronic Art's Star Performers label Amiga owners can get classic flight 'n' fight simulation with *F/A-18 Interceptor*, the fantasy role player *Bard's Tale II* and the futuristic racer *Powerdrome* (two latter games also available for STs, PCs and compatibles) for £10.99..

Meanwhile, cassette-based Amstrad CPC and C64 people can fly high with *Chuck Yeager's Advanced Flight Trainer*, drive hard with *Ferrari Formula One*, and Skate Or Die for only £3.99 a piece, or on diskette for £7.99.

That's some of the old. As for the new... Bullfrog's highly playable arcade-style romp *Flood* and Eldritch The Cat's fast-moving future sport *Projectyle* have just been re-released for the Amiga and Atari ST. They are joined by IBM PC incarnation of *Ferrari Formula One* (already available for the Amiga and Atari ST) and the martial arts fighting thrills of *Budokan* on the Amiga and IBM PC and compatibles. Finally, Eldritch Games' *Hound Of Shadow* makes its debut on the IBM PC and compatibles.

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03
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3RD SET
3

Projectyle's author Eldritch The Cat (also responsible for the recently released Amiga conversion of ***Chuck Yeager's Advanced Flight Trainer 2.0***) is beavering away on a "wacky new project" provisionally title ***FLOPS*** - an acronym for Futile League of Pathetic Superheros.

Eldritch Games on the other hand is currently working on a follow up to its ***Hound of Shadow***. Sadly, further details are vague as the project's still in its very early stages. Incidentally, Hound's artist - Carl Cropley - is providing the visuals for Virgin Games' forthcoming and controversial espionage thriller ***Floor 13***.

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AND FROM THE MAKERS OF POPULOUS...

"There are two important things I have to say about ***Populous II***," declares Bullfrog's Peter Molyneux when asked about what's already tipped to become the 1991 Christmas Number One. "Firstly, we're not using any of the original ***Populous*** code. And secondly, it's going to blow everything else away. "

Both Bullfrog and its publisher Electronic Arts is keeping further details close to its chest.

What is known, however, is that compared to the original's handful of special effects, the sequel will features dozens, including whirlpools, columns of fire and water, tidal waves, pestilence and plagues, all of which will, according to Molyneux, be "beautiffully animated", with over 1,000 frames of animation used from artist Gary Carr.

POPULOUS II

Less imminent than the ***Powermonger*** *Players Guide* mentioned in *Express* 130, but just as relevant, is the release of the first ***Powermonger*** Data Diskette at the end of July.

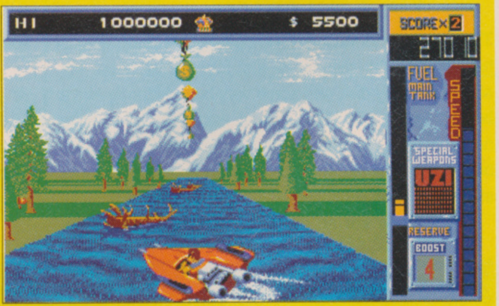
"When we designed ***Powermonger***," says Molyneux, "we made sure we left enough hooks for subsequent data disks to provide completely different missions and gameplay. Every data disk is almost a sequel in its own right. There's no real need for a ***Powermonger II***."

The Bullfrog team is currently putting in extensive playtesting on the World War I in which you control six generals directly. "Effectively every one is a troop," reveals Molyneux. "Some of the troops act on their own initiative and build defences, manufacture aeroplanes and have squadrons of fliers, squadrons of tanks." The next proposed data disk will have a fantasy scenario - "It'll be less to do with wargaming and more to do with magic," says Molyneux.

For the release of ***Powermonger*** in Japan and USA, Bullfrog is to produce data disks concerning an oriental battle scenario and the American civil war.

HYDRA
TENGE

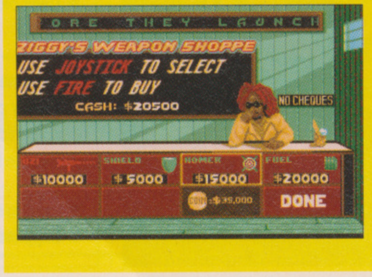
Domark
Amiga & Atart ST £25.53
Amstrad CPC, Commodore 64, Spectrum
Cassette £11.23 Diskette £15.31



• Hydra on the Amiga looks right pretty with its convincing rippling water effect. What a pity its simplistic blasting action lacks any interesting rewards.

With *RoadBlasters*, Atari Games was probably the first arcade machine manufacturer to create the race 'n' blast action we all know and... well, don't mind.

Ever since *RoadBlasters*, practically every new incarnation has attempted to repeat the formula with a novel twist or two – such as a shop from which equipment and weaponry can be bought.



Hydra's differences are two-fold: one minor, in that the scenario casts the player as a courier of the future, the other only marginally more important in that the action is water-based. *Hydra* was converted from Atari Games' coin-operated original to the home computer systems by Ice Software, the team behind conversions of Taito's Special Criminal Investigation: *Chase HQ* for Ocean. And it's a competent job all round, with enough spit and polish to create an accurate arcade look and feel. It's a shame then that that the coin-operated original was just so... unremarkable.

EVERYONE'S GONE GREEN

According to EA, in its first two months of release the Amiga version of ***Powermonger*** sold more copies than the Amiga version of ***Populous*** has in its lifetime!

● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

SWIV

STORM • AMIGA

Begin play then pause the action. Now type NCC-1701 to allow you to resume play with an unlimited number of lives for both the chopper and the jeep.

● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

PEDIGREE PROGRAMMER

SCORE 00030 TRASH 07 LIVES 03

It seems that the days of acne cream-coated coders hunched over keyboards in their bedroom until all hours are over.

Today's progger is more concerned with a different set of figures. Take Bullfrog's Sean Cooper (and there are plenty of gals who'd like to that's for sure). Having wet his whistle with ***Flood*** on the Amiga, the 20-year-old Vanilla Ice-alike is now set to send pulses racing as a model.

Sultry Sean's finely-honed physique has earned him a place in the last 16 contestants in BBC Television's *Clothes Show* Model Of The Year Competition - and that was from an initial selection of some 5,000 entrants! You can see how Sean fares in June when the final is shown on the box.

VIZ

VIRGIN GAMES & JOHN BROWN PUBLISHING • AMIGA, ATARI ST

When the character selection screen appears type WHAT A LARGE SET OF BOLLOCKS (including spaces). The border will change colour and a beep will be heard to indicate that the cheat mode is active.

Now Amiga owners can play the level of their choice by pressing a number key from 1 to 5. Atari ST owners don't get such a luxury - instead they get to continue play from the level on which play ended.

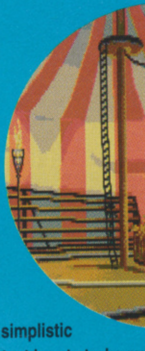
??? GOT A PROBLEM ???

Bad luck, eh. But fear not, for we may well be able to help – with anything game-related anyway. Simply jot down in as much detail as possible exactly what the problem is and send it to DO ME A LEMON, Games Week, *New Computer Express*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Maybe it's a certain problem that's causing you to scream. Maybe it's a certain screen that's causing you problems. Or perhaps you simply need a cheat mode. Whatever the score, personal replies are out of the question, but we will endeavour to answer as many queries as possible through these pages. And don't forget to mention the game's title (look, it happens).

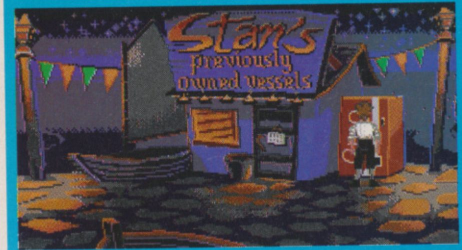
THE SECRET OF MONKEY ISLAND

Lucasfilm Games Via US Gold
Amiga and Atari ST £25.99
Already Available:
IBM PC & Compatibles



My, how George Lucas' software division Lucasfilm Games has come on since its humble, fractal-based arcade action beginnings. Now the company knocks out top notch graphic adventures instead, and this latest is no exception.

The Secret of Monkey Island is what would-be pirate Guybrush Threepwood must discover if he is to fulfill his dreams of bracing the main sail and sailing the high seas.



During Threepwood's travels you get to meet some real characters, such as the dead captain of a ghost ship, a pair of cowardly acrobats known as the Fettucine brothers, and - best of all perhaps - Captain Smirk from whom Threepwood learns the arts of fencing and insult and repartee ("You must be thinking of someone else - I am not a farmer.").

The story unfolds via the same interface as *Indiana Jones and the Last Crusade*: The Graphic Adventure, ie, a simplistic text input stroke multiple choice system with pretty pictures and animated characters. And very well it works too.

The puzzles are deftly woven into the storyline, which is full of surprises and more often than manages to raise a smile. All this comes at a price in terms of a considerable quantity of disk accessing, but that's the only gripe worth mentioning. After the innovative, but sadly lacking, fantasy romp *Loom*, *Monkey Island* is a return to form for Lucasfilm Games. You'd be hard pushed to find a more accessible and engrossing interactive storyline this year. Then again, work on the sequel is well underway...

• Avast! Well, it's not quite but there's certainly more than enough excellent adventure on the high seas to be found in The Secret of Monkey Island.

CHART CHAT

INSTANT REPLAY
MAFF
WIND
10 MPH
DRIVE
HOLE 16 PAR 4
STROKE 1
DISTANCE: 406 YDS
CLUB: DRIVER

● *PGA Tour Golf* author Sterling Silver Software is currently putting together another project in a sporty vein. However, its publisher Electronic Arts is remaining tight-lipped about it - for the time being anyway.

● When leading American developer Cinemaware 'wound down' earlier this year, the state of play with the company's potentially most impressive titles to date was up in the air. Now the dust has settled and the good news is that the tongue-in-cheek futuristic sports simulation *Rollerbabes* will in fact be released through Mirrorsoft as originally intended. Versions for the Amiga and IBM PC and compatibles will hit the streets towards the end of this year, with the possibility of an Atari ST conversion yet to be decided. Two other Cinemaware titles will also appear before the year is out, but Mirrorsoft is retiscent to reveal any further details at present.

TOP 10

SIXTEEN-BIT GAMES

THIS WEEK	LAST WEEK	TITLE	PUBLISHER	MACHINE
1	1	*Gods*	Renegade/Mindscape	ST AG
2	1	*Lemmings*	Psygnosis	ST AG
3	10	*Defender of the Crown*	Mirror Image	ST AG PC
4	4	*Fantasy World Dizzy*	Codemasters	ST AG
5	3	*PGA Tour Golf*	Electronic Arts	AG PC OT
6	15	*Little Puff*	CodeMasters	ST AG
7	11	*Chuck Rock*	Core Design	ST AG
8	RE	*Steve Davis World Snooker*	CDS	ST AG
9	NE	*Armour Geddon*	Psygnosis	AG
10	NE	*Killing Cloud*	Mirrorsoft	ST AG

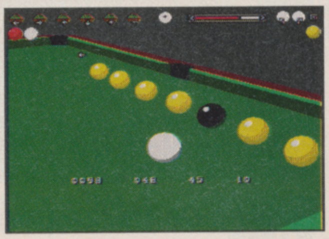
ST = Atari ST AG = Commodore Amiga PC = IBM PC or compatible OT = Other
Chart compiled by Gallup. © European Leisure Software Publishers Assoc.

Games Week

HINTS AND TIPS

0054 060 45 10

0062 100 45 10



3D POOL

Mirror Image • AMIGA, ATARI ST

There's only one way to perfect your play and that's through practice. However, it's a different story when it comes to solving the 20 trick shots. The numbers shown at the bottom of the screen are for reference. When a shot is completed, make a note of the numbers so you can repeat your performance whenever you see fit.

The first four digits represent the table's orientation (0000-1023). The following three figures show the table's tilt (024-100), while the next two numbers are the strength of the shot (00-63) and the last two are the amount of right-hand spin (00-20).

So, here we have the 'solutions' to the 20 trick shots. It's wise to set up the shots via the icons at the top of the screen as they are more accurate than moving the table. If you wish to replay the successful shot but from a different angle, take advantage of the EDIT SHOT facility.

SHOT ONE	0768 024 63 10
SHOT TWO	1002 041 63 09
SHOT THREE	0032 100 63 00
SHOT FOUR	0962 024 63 00
SHOT FIVE	0512 024 63 10
SHOT SIX	0405 060 63 20
SHOT SEVEN	0018 061 63 20
SHOT EIGHT	0771 099 56 12
SHOT NINE	0932 024 63 11
SHOT TEN	0927 027 63 20
SHOT ELEVEN	0751 100 16 20
SHOT TWELVE	0916 025 55 10
SHOT THIRTEEN	0004 054 58 20
SHOT FOURTEEN	0864 100 63 10
SHOT FIFTEEN	0084 076 12 00
SHOT SIXTEEN	0880 048 39 20
SHOT SEVENTEEN	0372 100 63 06
SHOT EIGHTEEN	0512 100 63 10
SHOT NINETEEN	0601 024 63 20
SHOT TWENTY	No solution.

This table's yours to set up at your leisure.

FLOOD

Electronic Arts Star Performers

AMIGA, ATARI ST

SCORE 00030 TRASH 07 LIVES 03

Enter any one of the following codes when prompted to play the relevant level...

1	FROG	2	YEAR	3	QUIF
4	LONG	5	WORD	6	FRED
7	WINE	8	GRIP	9	TRAP
10	THUD	11	FRAK	12	VINE
13	JUMP	14	NILL	15	FOUR
16	GRIT	17	ZING	18	JING
19	LIDO	20	POOL	21	HATE
22	REED	23	LIME	24	QUID
25	WING	26	FLEE	27	GIGA
28	HEAD	29	LOOP	30	SING
31	JOUX	32	PINK	33	GOGO
34	LETS	35	QUAD	36	BRIL
37	EGGS	38	HENS	39	NAIL
40	SOAP	41	FOAM	42	MEEK

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Load Saved RR
Load Tutorial
Sid Meier's
RAILROAD
TYCOON

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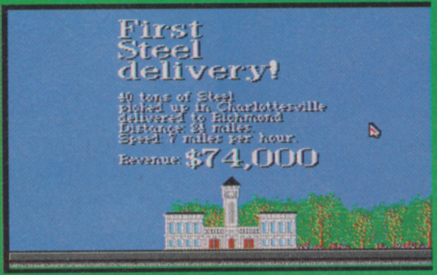
To Come: Atari ST

American flight 'n' fight simulator designer Sid Meier has turned his hand to simulating a war of a different kind with *Railroad Tycoon.*

Here the player is afforded the opportunity to make a better job of running a railway than British Rail. Apart from keeping the health of your bank balance and investors under control, a certain someone also has to buy and maintain the stock, decide where to lay track and so on.



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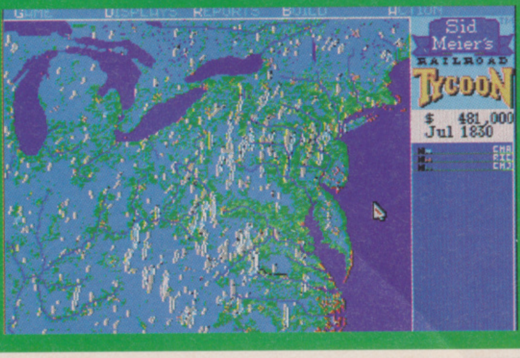
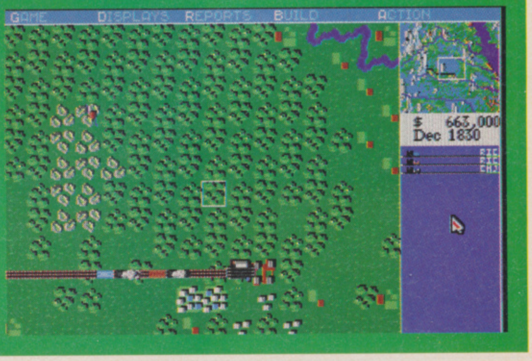
• A case of Fatal A-track-tion... Amiga Railroad Tycoon. It may look like a dog's dinner - actually it doesn't but it ain't no oil painting. And yet it plays like prime fillet steak and chips with all the trimmings.

God, it sounds tedious on paper. Not so in practice though. Why it holds for so long the attention of anyone who plays it is beyond reasoning.

That said, it's not without fault. For a start, you need 1Mb to play, which makes its small niggles (such as disk accessing) all the more unforgiveable. The player interface is unimpressive too. Having to interact with entertainment software via pull-down option lists has always struck me as testimony to the designer's laziness or lack of imagination - even if the product's as diverse as this. Still, I'm loathe to moan too loudly lest I put you off *Railroad Tycoon* altogether. It'd be a shame for something so surprisingly entertaining to go ignored.





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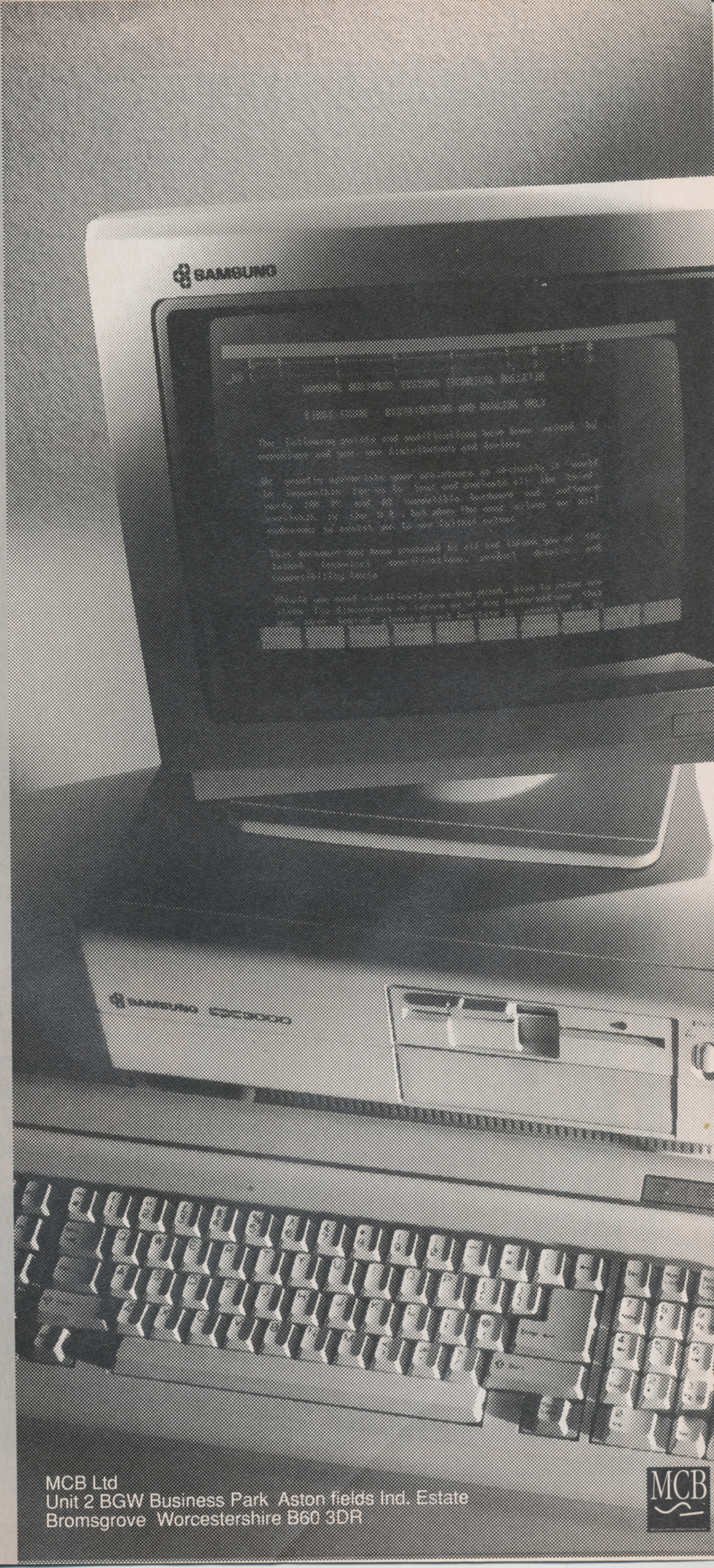

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MCB

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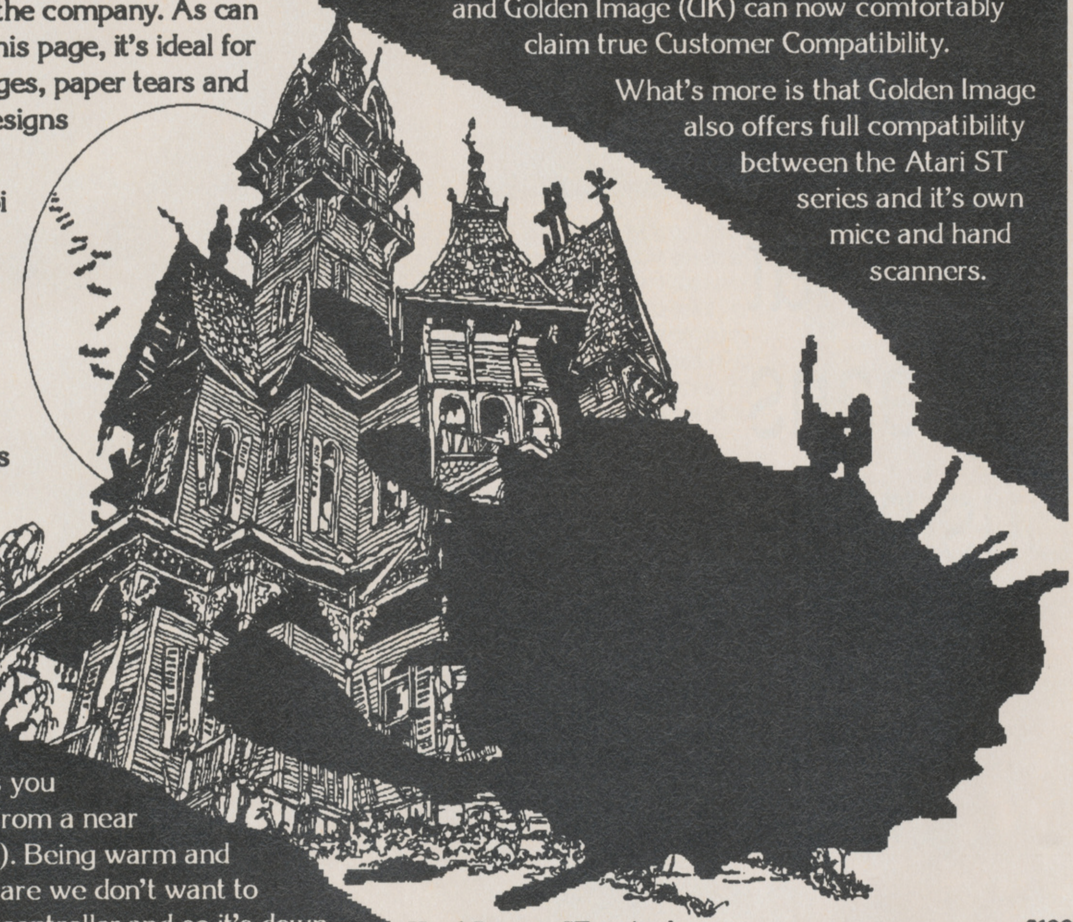
The Golden Image hand scanner is the cherry on top of the cake. Crowned in Gold by ST Format, it's reputation follows that of the company. As can be seen from this page, it's ideal for scanning splodges, paper tears and architectural designs (or disasters!).

It offers 400 dpi in four pattern modes and is supplied with the excellent Touch-Up software from MiGraph and it's utterly brilliant!



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TOP END PC PORTABILITY

Psion is best known for its electronic Filofax the Organiser. Keith Pomfret pockets the MC 600, Psion's serious swipe at the PC laptop market.

• On Psion's MC600 you can use the battery or mains driven floppy to run MS-DOS compatible software.

There's no disputing Psion's position at the top of the heap in the pocket computer class. The Psion Organiser has been up mountains, down in submarines and can be seen in specialist applications in such hallowed halls as Marks and Spencer.

The MC600 is a small clamshell computer, no larger or heavier than a telephone directory, with a CGA LCD screen and several other features found on similar portable PCs. However, where the MC600 differs is in that Psion hasn't taken the common route to compromise so beholden of clone manufacturers.

The MC in MC600 stands for mobile computer and that is the prime consideration in the design. Gone are the heavy and power draining features to be replaced by lightweight and power conserving features. There are no disk drives in the traditional sense. Storage takes the form of read/write RAM drives.

Psion had an earlier punt at the lightweight laptop league with the MC400, designed along similar principles, but with a proprietory operating system and software. The MC400 was reasonably well received by those already conviced by Psion's innovative approach to computing, but many (including more than a handful of computer journalists who should know better) wanted the unbiquitous MS/DOS.

The MC600 runs the familiar PC operating system MS/DOS and to all intents and purposes acts like an 8MHz PC XT laptop clone. The version of the disk operating system is 3.22. That's hardly state-of-the-art with version five looming over the horizon, but it's enough for the MC600 to manage with. Later versions of DOS were designed to cope with features that the MC600 doesn't have so perhaps it would be a waste anyway.

There are no conventional floppy disk drives – all of the storage is handled by RAM packs. A total of four 1Mb read/write RAM drives can be slotted in. This could cause problems since conventional programs come on floppies which won't fit in to the RAM slots.

Psion has got round this problem by providing Lap Link 3. This is a very fast serial link which allows you to connect up to another PC and transfer files quickly by cable. If that won't do or you need to use copy protected software on disk, there's an external floppy disk drive option. If in use regularly in an office, there's a connector for an external CGA monitor, but this is a Mini-DIN connector instead of the more common 9D. A connection cable to change the Mini-DIN to a 9D will probably be needed for that option.

> **"A machine for those with an eye for innovation . . ."**

On the rear there's a standard 25-pin printer port, and a 9-pin MINI-DIN serial port. These are both under a flip up flap on one side of the machine. On the other side at the rear, there's an expansion slot, again hidden under a flip up flap. This is designed to take dedicated add-ons such as a modem and other peripherals.

LIGHT WEIGHT

The MC600 opens up like any clamshell, but the first thing you notice before you even open it is its lack of weight. A carrying handle is provided, but this isn't necessary as the MC600 can be carried like a book.

With the MC600 open it looks much the same as any clamshell laptop only slightly smaller. The full travel keyboard is of the standard qwerty PC layout with the numeric keypad embedded in the alpha keys and accessible by pressing another key.

The control sequence keys such as Page Up, Page down, Insert, Home, Delete, etc, are half size and in a small cluster on their own above the keyboard. The 10 function keys are 2/3 size and sit above the keyboard. A removable clear plastic cover allows you to put labels in above them to remind you what functions are assigned.

Above the plastic cover is another row of half sized control sequence keys including the on/off key and an LCD status window. The status window shows such information as machine condition and battery/power status. Psion claims a battery life of 20 hours continuous use with the backup battery acting for up to 100 hours if main battery power is lost.

IN USE

The MC600 behaves like any XT laptop in use, but is lighter to carry and with using RAM packs instead of disks, loads programs much more quickly. Screen resolution is 80 columns by 25 lines of text and 640 x 200 pixels in CGA graphics mode. Unusually, it isn't backlit and you have to rely on the right light conditions to be assured of a good view of the screen. Overall, it's the best non backlit LCD screen we've used and the surface is less prone to reflection than many others.

The keyboard is good with a pleasant response and an audio 'click' which can be disabled. A very useful feature is the ability to close down in mid application and re-open where you were at closedown. The whole thing can be password protected too, so your data is safe from prying eyes.

STATE-OF-THE-ART

It's a pleasant lightweight portable that can be easily carried around like a book or slipped into the briefcase. It is well specified and simple to use and ran all of the PC programs that we threw at it. At nearly £1,300 it's over twice the price of the cheapest hard drive laptop we've reviewed so it isn't cheap. Still, that's the price you pay for state-of-the-art machines. It's a nice machine and those with an eye for innovation who aren't frightened of new storage technology will buy it.■

FOR AND AGAINST

FOR
- ▲ Innovation
- ▲ Lightweight
- ▲ Easy to use

AGAINST
- ▼ Very costly
- ▼ Non standard storage
- ▼ No backlight on screen

PORTS AND CONNECTORS

Parallel	25D female
Serial	Mini-DIN Null modem cable provided
Drive	D20
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Monitor	Mini DIN

Expansion port for accessories including a modem.

WHAT'S IT ALL COST?

MC600	£1,295
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- ★ 20 qualified technician engineers at your disposal
- ★ We will undertake to repair your Amiga 500 computer for just £44.95 including parts, labour, VAT and post & packing
- ★ Most computers will be turned around in just 24 hours!
- ★ Prices include full service check, overhaul, soak-test and replacement of power supply unit if necessary
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- ★ All repairs covered by a 90 day warranty

Upgrade your Amiga from 512K to 1Mb of memory for just £25.00

SPECIAL EXCLUSIVE OFFER:

If you submit your computer to ourselves for repair, enclosing this advert along with just an additional £25, we will supply and fit a 512K memory expansion at no extra cost.

How to take advantage of this exceptional offer: simply send or hand deliver your machine to the workshop address detailed right, enclosing payment and this advert and we will do the rest. (If possible please include a daytime telephone number and fault description).

** If you require 24 hour courier to your door, please add £5 else your computer will be sent back by contract parcel post.*

WTS ELECTRONICS LTD

STUDIO MASTER HOUSE
CHAUL END LANE
LUTON, BEDS, LU4 8EZ
Telephone (0582) 491949 - (4 lines)

WTS reserve the right to refuse machines that in our opinion are tampered with, to an extent beyond reasonable repair

GIVE YOUR PC A PRIZE

Always forgetting appointments and missing dates? Look no further – Express can help. Try out your luck and you could be one of two winners to take home PC Collection. Once you've got it you'll never know how you lived without it.

• *PC Collection takes the hard work out of getting and keeping organised.*

Here's your chance to grab one of the two PC Collections that are up for grabs. The £233 PC collection is all that you'll ever need to make sure you never forget anything important.

The PC Collection is a filofax style organiser that comes with a suite of programs designed to take your life by the scruff of the neck and turn it into a more productive and better managed existence.

The PC collection takes the concept of time management, combines it with a suite of organisational utilities, a deluxe organiser and printer drivers that enable you to edit all your schedules on your PC before printing them on to special organiser paper.

The programs provided in the PC collection include a diary, address book, telephone directory, database, information pages and utilities. These break down into further sections. In the diary programs there are diaries, appointments lists, year planners, calendars, anniversaries and other integrated software.

PC Collection is from Millgate on 0628 784001. As well as the deluxe version on offer, there's an executive version where the organiser is replaced by one made from supple quality burgundy hide.

To win the standard version, all you have to do is answer the questions, complete the tie-breaker in less than 12 witty words and send it to the *Express* Organiser Compo, 29 Monmouth Street, Bath BA1 2AP.

1) What did we used to call personal productivity planners in the good old days?

a) Secretary
b) File of Facts
c) Diary
d) Blotter

2) Which of these isn't a productivity planner?

a) Filofax
b) PC Collection
c) Time Manager
d) Notebook

4) Which company that distributes PC collection has the telephone number 0628 784001?

a) Milgate
b) Colgate
c) Cow and Gate
d) Nand gate

5) How many hours are there in the Icelandic winter week?

a) 164
b) 168
c) 336
d) 172.33

Complete the following in less than 12 words.

My life's in a mess and needs sorting out because ....

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NAME ....

ADDRESS...

...

TELEPHONE NUMBER ....

To the newsagent : *New Computer Express* is published by Future Publishing and is available from your local wholesaler. Send back all your Future shop save coupons for entry in a free draw to: Kate Hodges, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.

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- Front End
- Games Week
- Whole Wired World
- Tech Tips
- Circuit City
- Express On-line
- Express Mail
- The PD Column
- Programming
- Columns for: Amiga, Archimedes, CPC, C64, Macintosh,PC, Spectrum and ST

AND
Part 3 of the free Amiga software compo

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'Your guarantee of value'

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This magazine comes from Future Publishing, a company founded just six years ago, but which now sells more computer magazines than any other publisher in Britain. We offer:

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The Citizen 124D Printer

CITIZEN PRINTERS

Silica presents some great offers on the award winning range of high quality dot matrix printers from Citizen. Each Citizen printer is built in the UK to exacting standards, ensuring superb reliability and a very high quality of output. Our confidence in the quality of Citizen printers is such that we are pleased to offer a unique two year guarantee with every printer. Plus, if you purchase your Citizen printer from us, we will give you a Silica Printer Starter Kit (worth £29.95), *FREE OF CHARGE!*

FREE DELIVERY
Next Day - Anywhere in the UK mainland

FREE STARTER KIT
Worth £29.95 - With every Citizen printer from Silica.

FREE COLOUR KIT
Worth £39.95 - With Swift 9 and Swift 24 printers.

2 YEAR WARRANTY
Silica offer a 2 year warranty (including the printer head) with every Citizen printer purchased from Silica.

WINDOWS 3.0
Free Windows 3.0 driver - In the Silica Starter Kit.

FREE HELPLINE
Technical support helpline open during office hours.

MADE IN THE UK
Citizen printers are manufactured to high standards.

144 CPS DRAFT 9 PIN

CITIZEN 120D+

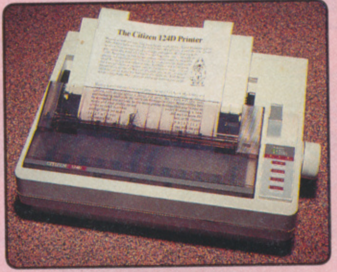
The Citizen 120D+ is one of the UK's best selling printers. It has a stylish appearance and excellent features and performance for such an inexpensive printer. The 120D+ is available with either a serial or parallel interface and is an ideal first printer.

- *9-pin Printhead*
- *Print Speed 144cps Draft*
- *30cps NLQ*
- *Epson & IBM Graphics Emulation*
- *Pull Tractor & Bottom Feed*
- *Superior Graphics - 240×216dpi*
- *FREE Starter Kit*

RRP	£233.83
STARTER KIT	£29.95
TOTAL RRP:	£263.78
SAVING:	£112.20
SILICA PRICE:	£151.58

£129
+VAT = £151.58

144 CPS DRAFT 24 PIN



CITIZEN 124D

The award winning Citizen 124D brings high quality 24-pin dot matrix printing within every computer users reach. It is the ideal choice where high quality printing is required at a budget price.

- *24-pin Impact Printer*
- *Print Speed 144cps Draft*
- *2 LQ Fonts (48cps)*
- *8K Buffer*
- *Epson, IBM & NEC P6+ Emulation*
- *Advanced Paper Parking*
- *Superior Graphics - 360×360dpi*
- *FREE Starter Kit*

RRP	£292.58
STARTER KIT	£29.95
TOTAL RRP:	£322.53
SAVING:	£112.20
SILICA PRICE:	£210.33

£179
+VAT = £210.33

192 CPS DRAFT 9 PIN

Swift 9 Colour Printer

SWIFT 9 - COLOUR!

The Citizen Swift 9 is perfect for those who require high quality dot matrix black or colour printing at a budget price. The print quality of Swift 9 rivals that of other manufacturer's 24-pin models.

- *9-pin Impact Printer*
- *Print Speed 192cps Draft*
- *3 NLQ Fonts (48cps)*
- *8K Buffer*
- *Epson & IBM Graphics Emulation*
- *Advanced Paper Parking*
- *FREE Starter Kit*
- *FREE Colour Kit*

FREE! COLOUR KIT

RRP	£280.83
STARTER KIT	£29.95
COLOUR KIT	£44.65
TOTAL RRP:	£355.43
SAVING:	£133.35
SILICA PRICE:	£222.08

£189
+VAT = £222.08

192 CPS DRAFT 24 PIN

Swift 24 Colour Printer

SWIFT 24 - COLOUR!

The Citizen Swift 24 is one of Europe's best selling printers and has won awards including Printer Of The Year 1990. Its rapid print speed, quality and black or colour options, make it a natural choice.

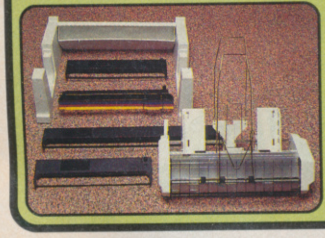
- *24-pin Impact Printer*
- *Print Speed 192cps Draft*
- *4 NLQ Fonts (64cps)*
- *8K Buffer*
- *Epson, IBM & NEC P6+ Emulation*
- *Advanced Paper Parking*
- *FREE Starter Kit*
- *FREE Colour Kit*

FREE! COLOUR KIT

RRP	£428.88
STARTER KIT	£29.95
COLOUR KIT	£44.65
TOTAL RRP:	£503.48
SAVING:	£199.15
SILICA PRICE:	£304.33

£259
+VAT=£304.33

PRINTER ACCESSORIES



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PRA 1228	124D/Swift 9/24	£42.00
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PRA 1209	Swift 9/124D	£32.25
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RIB 3924	124D/Swift 24 Black	£4.70
RIB 3936	Swift 9/24 Colour	£15.63
COLOUR KITS		
PRA 1236	Swift 9/24	£39.65

All prices include VAT and Free delivery.

FREE! STARTER KIT

Every Citizen printer from Silica, comes complete with the Silica Printer Starter Kit, including everything you need to get up and running with your new printer immediately, FREE OF CHARGE!

- *3½" Dual Format Disk with Amiga & ST Printer Drivers*
- *3½" Disk with Drivers for Microsoft Windows 3*
- *2 Metre Parallel Printer Cable*
- *200 Sheets of High Quality Continuous Paper*
- *200 Continuous Address Labels on Tractor Feed*
- *5 Continuous Envelopes on Tractor Feed*

If you already own a printer, and would like a Silica Printer Starter Kit, you may order one (ref: KIT 5000) for the special Silica price of £24.95 - £5 off RRP!

NORMAL RRP
£29.95

200 SHEETS PRINTER PACK

SILICA SYSTEMS OFFERS YOU

- ***FREE OVERNIGHT COURIER DELIVERY:*** On all hardware orders shipped in the UK.
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- ***PAYMENT:*** By cash, cheque and all major credit cards.

Before you decide when to buy your new printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or software, or some technical help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is one of the UKs leading independent computer dealers and provides a quality service to users at home, in education and in business throughout the nation. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature on the Citizen printer range and begin to experience the "Silica Systems Service".

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To: Silica Systems, Dept NCE 0591-54, •1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND CITIZEN PRINTER INFORMATION

Mr/Mrs/Ms: .... Initials: .... Surname: ....

Address: ....

....

.... Postcode: ....

Tel (Home): .... Tel (Work): ....

Company Name (if applicable): ....

Which computer(s), if any, do you own? ....

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